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OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

JANUARY

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1989

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OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

JANUARY 1989

VOLUME XXX

NUMBER 1

SCIENTIFIC

Transcervical Resection of Submucous Uterine Fibroids: An Alternative Approach to Management

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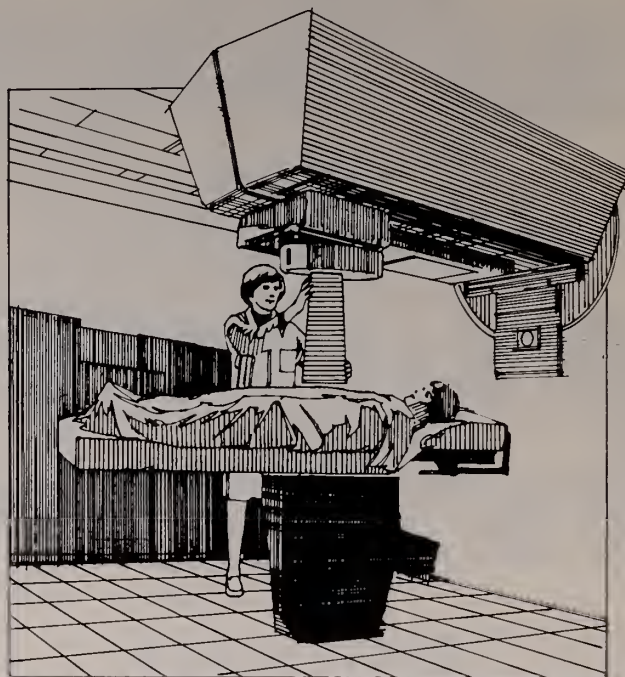
Executive Director

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NEWSLETTER

January 1989

Dear Doctor:

At press time, hundreds of MSMA members and spouses were expected to be in Jackson for "We Care Day." The day includes a special session of the MSMA House of Delegates, legislative information sessions, and a trip to the Capitol for discussions with legislators about two issues affecting medical care in Mississippi - tort reform and care of the medically needy.

"We Care Day" is sponsored by MSMA, the Mississippi Hospital Association, the Mississippi Association of Hospital Governing Boards, and the Mississippi Organization of Nurse Executives. Watch for a report on "We Care Day" in the next issue of your Journal MSMA.

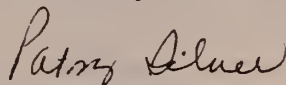
In a joint press conference last month, the MSMA and the Mississippi Hospital Association announced their support for expansion of the state Medicaid program by halting funding for the state's three charity hospitals. "We urge the state to seek maximum federal matching funds for all monies it spends on health care," said MSMA president David R. Steckler, M.D. "We support a statewide single level of health care." The action was in keeping with the policy recently adopted by the MSMA Board of Trustees dealing with Medicaid and care of the medically needy.

At its December meeting the AMA House of Delegates adopted an amended version of Report AA (from the AMA Board of Trustees) dealing with the Harvard Resource Based Relative Value Scale study. Copies of Report AA, which does not endorse the Harvard RBRVS study as published, can be obtained from your MSMA headquarters office by request.

DON'T FORGET...to mark your calendar for MSMA's 121st Annual Session, May 31-June 4 in Biloxi.

From your MSMA staff -- Best Wishes for a Happy New Year!

Sincerely,



Patsy Silver
Managing Editor

There is strength in numbers. *(And our numbers are growing.)*



Seated, Left to Right: Cheryl Maxwell (Claims Secretary), Lisa Noble (Underwriting Secretary), Maria Graham (Claims Secretary), Kim Ormond (Receptionist), Mike Houpt (General Manager), and C.G. "Tanny" Sutherland, M.D. (Medical Director)

Standing, Left to Right: C.R. "Bob" Montgomery (General Counsel), Lisa Stewart (Underwriting Secretary), Sharon Thompson (Claims Secretary), Craig Brown (Underwriting Manager), Joey Grimes (Controller), Chuck Dunn (Assistant General Manager), and Debbie Sutherland (Bookkeeper)

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DATELINE

Apply for Scientific Exhibit Space Now

Jackson, MS - Physicians wishing to apply for scientific exhibit space at MSMA's 121st Annual Session, May 31-June 4, are urged to make application now, while space is still available. Exhibitors are eligible for the Aesculapius Award. To request scientific exhibit space, send a letter to MSMA with the following information: description and title of exhibit, names of exhibitors, and estimated number of linear feet required.

Component Societies Reminded Of Service Award Deadline

Jackson, MS - MSMA component societies have until February 15 to submit nominations for the MSMA Community Service Award. The award recognizes an individual physician for outstanding accomplishments in community service, and consists of a commemorative plaque and a \$500 donation to a charity or civic organization designated by the honoree. The award will be presented at the 121st Annual Session, May 31-June 4 in Biloxi.

"Senior Care" Program Is Set for Expansion

Jackson, MS - Physicians in the southern and central areas of the state will be receiving letters urging participation in "Senior Care," a program of assistance for qualified medically needy persons. Participating physicians voluntarily accept Medicare assignment for eligible seniors. The program, sponsored by MSMA and the MS Council on Aging, has completed the pilot stage in two other areas of the state.

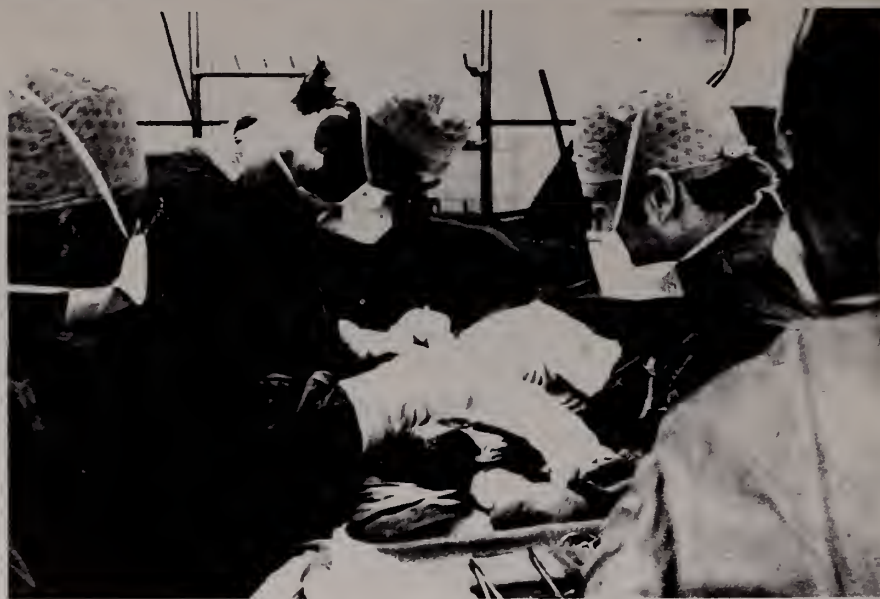
Certificate of Need Proposals for Legislature

Jackson, MS - Among recommendations by the State Board of Health to the legislature are these certificate of need (CON) proposals: (1) exempt county-owned hospitals under 100 beds from the home health care moratorium; (2) allow nursing homes with less than 60 beds to expand to 60 beds; (3) allow county-owned hospitals to convert vacant beds to long-term care beds; (4) clarify definition of capital expenditures for CON review.

State Laws Address Indigent Care, Liability

Chicago, IL - AMA's Dept. of Legislation reports various legislative efforts to ensure availability of health care despite the adverse liability insurance climate. North Carolina has created a pilot program in which physicians providing obstetrical services in underserved counties are reimbursed by the state for the cost of liability insurance. Other state laws grant physicians immunity from liability for free care.

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ORIGINAL PAPERS

Transcervical Resection of Submucous Uterine Fibroids: An Alternative Approach to Management

BRYAN D. COWAN, M.D.,
RONALD P. KNOBLOCH, M.D.,
G. RODNEY MEEKS, M.D. and
W. LAMAR WEEMS, M.D.
Jackson, Mississippi

UTERINE MYOMAS (FIBROID TUMORS) are a common gynecological condition and frequently cause symptoms of uterine bleeding, pelvic pain, and on occasion, infertility. Typically the symptoms produced by fibroids depend upon the size, location, and condition of the tumor. Traditional management of women with symptomatic uterine fibroids includes hysterectomy if reproductive potential is no longer desired, or laparotomy with uterine myomectomy in women who desire fertility. Transfundal myomectomy is required to remove deep intramural and submucosal fibroids. This procedure is often associated with significant blood loss and scars the uterus such that most (if not all) pregnancies that occur after this procedure should be delivered by cesarean section.

Laparotomy with myomectomy requires 3-5 postoperative hospital days for convalescence and 2-4 weeks of ambulatory convalescence before com-

From the Division of Reproductive Endocrinology, Department of Obstetrics and Gynecology (Drs. Cowan and Meeks) and the Division of Urology, Department of Surgery (Dr. Knobloch and Weems), University of Mississippi Medical Center, Jackson, MS.

Transcervical resection of submucous uterine fibroids can be an effective alternative to laparotomy and transuterine myomectomy in selected women. To date the authors have performed this procedure in three patients in an ambulatory environment. In two patients, transcervical resection was performed for giant intrauterine myomas which caused pathologic uterine bleeding and infertility. In a third patient the procedure was performed to resect multiple small submucous myomas causing infertility.

plete recovery. To reduce this operative morbidity, we have become interested in transcervical resection of submucous fibroids as an alternative form of management for women who wish to retain their uterus. Such a technique could reduce surgical complications, diminish the time required for postoperative convalescence, reduce the cost of the procedure, and eliminate the need for cesarean delivery

of a pregnancy. We report our initial team experience of transcervical resection of submucous fibroids in three women.

Materials and Methods

Operative Technique — Either spinal or general anesthesia was suitable for the procedure. The patient was placed in the lithotomy position, and the genitalia and vagina prepped with a povidine-iodine solution. When necessary, the cervical canal was dilated to accommodate a standard, continuous flow urological resectoscope (Olympus) attached to a peristaltic pump. The uterine cavity was distended by manipulating the rate of glycine (1.5% solution) infusion or slowing the pump rate. The uterine cavity was easy to inspect and the submucous fibroid(s) as well as both uterotubal ostia were identified in all three cases. Resection of the myoma(s) was performed with electrocautery just as resection for bladder or prostatic tumors. As the resection continued, “chips” of the specimen accumulated within the uterus and it was necessary to frequently remove the resectoscope to allow these to escape. Bleeding was minimal, and any bothersome bleeding sites were easily controlled with electrocoagulation.

Postoperative Care — All patients were managed as outpatients. They returned home the same day of their procedure after recovery from anesthesia. To date no vaginal packs, intrauterine devices, or antibiotics have been used.

Case Reports

Case 1: A 26-year-old, G0 was evaluated for abnormal uterine bleeding. She was found to have a submucous fibroid and was treated with oral contraception. Her oral contraception failed to control her symptomatic uterine bleeding, and she was admitted on an emergency basis with significant uncontrolled vaginal bleeding. She underwent emergency transcervical resection of her submucous

fibroid, and 33.5 gm of tissue was resected. Histopathologic evaluation revealed a typical uterine fibroid with no mitotic activity. She has been followed for the past 11 months with no recurrence of her symptoms (see Table 1).

Case 2: A 36-year-old, G0 was evaluated for longstanding infertility. A large submucous fibroid filled the entire endometrial cavity on hysterosalpingogram. She underwent initial transcervical resection of the fibroid at which time 19 gm of tissue was resected. Four months later she developed chronic vaginal bleeding which produced anemia. She was treated with a GnRH agonist (Lupron) in an effort to shrink the fibroid and to control this bleeding. Four months later she underwent repeat transcervical resection at which time 20 gm of submucous fibroid were resected, but the resection was incomplete. Finally, one month later, she underwent complete resection of her submucous fibroid at which time an additional 20 gm of fibroid was obtained. Postoperatively she has done well with no abnormal uterine bleeding (see Table 1).

Case 3: A 38-year-old G1P1 was evaluated for infertility by laparoscopy and hysteroscopy at which time three previously unrecognized (approximately 1 cm) submucous fibroids were identified. Hysteroscopic resection produced approximately 5 gm of benign uterine fibroid chips. She has been followed for four months but to date has not conceived (see Table 1).

Discussion

Based on our initial experience with the procedure and similar experiences reported by others,¹⁻³ we believe that transcervical resection of submucous fibroids is safe and will provide the treating physician with an important adjunct for the management of selected patients with this condition. We recommend transcervical resection of submucous fibroids in women with a known lesion, confirmed

TABLE 1

SUMMARY OF 3 WOMEN WITH INTRAUTERINE MYOMAS TREATED WITH AMBULATORY TRANSCERVICAL RESECTION

	Age	Diagnosis	Gravidity	Follow-up (months)	Lesion Weight (grams)	Persistent Symptoms
Case 1	26	Bleeding Giant Myoma	0	11	33.5	No
Case 2	26	Giant Myoma Infertility Bleeding	0	6	59	No
Case 3	38	Bleeding	1	4	5	No

by hysteroscopy or hysterosalpingogram, who desire to retain the uterus or have a medical condition that poses a contraindication to hysterectomy. Large lesions which occupy the entire cavity or are not completely pedunculated (Case 2) may require repeat resection for complete removal. This may be a more attractive form of surgical therapy than laparotomy with transuterine myomectomy in such patients. If the lesion extends into the wall of the uterus, laparoscopy should be performed concurrently with hysteroscopic resection. This guides the depth of the resection and provides an element of safety against unintentional uterine perforation and bowel injury.

Glycine solution (1.5%) is isotonic, electroconductive and is an ideal distension medium for this procedure. However, if large amounts are absorbed through open venous sinuses in the uterus or the peritoneum after spill through the fallopian tubes, hyponatremia can develop. Other distension media, such as high molecular weight dextran solutions, saline or carbon dioxide are not well suited for intrauterine electrocautery.

The urologist-gynecologist team approach for the management of this lesion with the resectoscope combines the skills of both physicians and seems to add an element of safety for the patient and confidence for the surgeon. The team approach is particularly important in the initial application of this technique, since the instrumentation is often unfam-

iliar to the gynecologist while this lesion is infrequently managed by the urologist.

Conclusion

We have demonstrated that submucous myomas can be easily resected with a combined urologist-gynecologist approach using a standard continuous flow resectoscopy. Glycine solution (1.5%) should be used as the distension medium for this procedure since it is readily available, isotonic and electroconductive. Transcervical resection appears to be safe and could reduce the surgical and pregnancy morbidity assumed by women who undergo traditional laparotomy and transuterine myomectomy for submucous fibroids. This technique offers an effective outpatient surgical management option not only for submucous myomas, but also for other lesions within the uterus.

★★★

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— Next Month in *Journal MSMA* —

- Management of the Patient with Postpartum Hemorrhage
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- Hematogenous Osteomyelitis and Septic Arthritis in Children: A Ten Year Review

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Pentobarbital's Effect In a Combination Antiemetic Regimen For Cisplatin Induced Nausea and Vomiting

JOHN B. WHEELLOCK, M.D.

Keesler AFB, Mississippi

SEVERE NAUSEA AND VOMITING is one of the most anxiety-provoking side effects of cisplatin based chemotherapy for patients with advanced gynecologic disease. Single antiemetic agents such as phenothiazines, steroids, and metoclopramide have shown good antiemetic efficacy during cancer chemotherapy with cisplatin.¹ Newer studies have shown combination antiemetic agents with different actions to achieve optimal antiemetic effect to be superior to a single-drug regimen.²

The author has previously compared the combination regimen of pentobarbital, prochlorperazine and dexamethasone with high dose metoclopramide.¹ Twenty-seven patients with advanced gynecologic malignancies undergoing cisplatin-based combination chemotherapy had significantly less vomitus than patients treated with metoclopramide alone. In addition, the sedative and sleep-inducing effect of the barbiturate made the experience of vomiting subjectively more tolerable, even in those instances where the combination regimen was not superior to metoclopramide in the control of vomiting.

One perception from the above study was that the combination of pentobarbital, prochlorperazine and dexamethasone appeared to exert a considerable amount of antiemetic effect in these patients due to the pentobarbital-induced sedation. The narcosis induced by this combination was described by patients as making the vomiting episodes and chemotherapy more tolerable.

The combination of dexamethasone and prochlorperazine has been reported as a drug combination

Twelve patients with histologically confirmed gynecologic cancer treated with a chemotherapy regimen containing cisplatin were randomized in a double-blind crossover trial utilizing two antiemetic combination regimens during the first four treatment courses.

Regimen A consisted of pentobarbital, prochlorperazine, and dexamethasone. Regimen B contained dexamethasone, prochlorperazine, and placebo. Patients chose Regimen A over B 70% of the time ($p < 0.0268$). In 50% of the treatment courses, objective assessment of Regimen A's antiemetic effect was complete compared with 4.5% for Regimen B. Sleep and reduced apprehension of cisplatin-induced emesis were the major factors why patients chose Regimen A.

The authors concludes that intravenous pentobarbital-induced sleep, when added to a combination antiemetic regimen, is effective in reducing vomiting episodes. Moreover, it provides a more pleasant chemotherapy experience in patients undergoing cisplatin containing chemotherapy.

with greater antiemetic effect than single-agent antiemetics.³

This report compares the antiemetic effects of the combination pentobarbital, prochlorperazine and dexamethasone with the three drug combination prochlorperazine, dexamethasone and placebo in 12 patients with advanced gynecologic malignancies

From the Department of Obstetrics and Gynecology, USAF Medical Center Keesler, Keesler AFB, MS.

receiving cisplatin-based combination chemotherapy to determine the effect pentobarbital has on a combination antiemetic regimen on control of emesis.

Materials and Methods

Twelve patients with histologically confirmed gynecologic cancer were treated with a chemotherapy regimen containing cisplatin. Patients were randomized in a double-blind cross-over trial utilizing two antiemetic combination regimens during the first four treatment courses. Patients' ages ranged from 43 to 65 years (mean, 53 years). No patient had received prior cisplatin exposure or prior antiemetic treatment. All patients had a Karnofsky performance status of 80% or better. All patients signed an informed consent prior to entry into this study. Patients were considered ineligible if they had contraindications to any of the antiemetic drugs included in the protocol.

All patients were hospitalized a total of 24 hours for administration of the chemotherapy. Nine patients had advanced ovarian cancer; two patients had recurrent uterine cancer and one patient had recurrent cervical cancer. Seven patients received cisplatin, doxorubicin and cyclophosphamide; four patients received cisplatin and cyclophosphamide and one patient received cisplatin. The median number of chemotherapy courses given was 8.5 (range 5 to 11). Cisplatin was given in a dose of 50mg/m² infused over a 6-hour period following induction of diuresis with hydration, mannitol and furosemide. Cyclophosphamide (500mg/m²) and doxorubicin (50mg/m²) were given intravenously over 2-3 minutes.

Patients were randomly assigned in a double-blind cross-over trial of two antiemetic regimens for the first four treatment courses. Regimen A consisted of pentobarbital, prochlorperazine and dexamethasone. Regimen B contained dexamethasone, prochlorperazine and placebo. Randomization consisted of either AABB, BBAA, ABAB, or BABA, for the first four treatment courses after which the patients then chose what she perceived as the two most optimal antiemetic courses after the four treatment trials.

Study parameters included both objective and subjective observations. The objective responses were determined by counting the number of emetic episodes. Vomiting was graded as absent, mild (1-3 vomiting episodes), or >3 vomiting episodes. Subjective responses were determined for each patient by using a questionnaire concerning her assessment of nausea and vomiting, side effects, se-

dation and antiemetic preference the morning after chemotherapy treatment. Overall treatment was graded by the patient as better, same or worse than the previous treatment(s).

Regimen A and B dosages and schedules are shown in Table 1. A Foley catheter was inserted into the bladder of patients to eliminate the need for frequent urination associated with the diuresis. All patients were instructed to remain in bed during the treatment. Diet was not restricted. Vital signs were taken every four hours. The nurses were instructed to count respirations only when the patient was asleep. No additional sedatives or antiemetic agents were given during the study.

Results

Twelve patients were entered into the study. This study was initially designed to enroll 20 patients, but the observer felt apparent marked differences were noted between two regimens after twelve patients to stop the trial. Two patients did not complete the four course trial because they found the cisplatin-induced nausea and vomiting to be intolerable on the prior regimen they had received. Of these two patients, one patient completed one course of chemotherapy, the other patient completed three courses. Their codes were broken. Both patients dropped out of the study after receiving Regimen B for the first time (see Table 2). Both patients were

TABLE 1
TREATMENT REGIMENS

Regimen A		
1. Pentobarbital 100mg in 50ml of 5% dextrose in water IV		
2. Dexamethasone 10mg IV push over 5 min	15 min	before therapy
3. Prochlorperazine 10mg in 50ml of 5% dextrose in water IV		
4. Repeat pentobarbital 100mg IV every 3 hr times 2 doses		
5. Repeat dexamethasone and prochlorperazine IV every 3 hr times 2 more doses		
Regimen B		
1. Substitute placebo in place of pentobarbital		
Dose and Modifications:		
a) Patients <60 years old with >1.8 m ² body surface: Increase the first dose of pentobarbital to 150mg, give 100 to 150mg as second and third dose, depending on patient's response (induction of sleep)		
b) Patients >60 years old with <1.5 m ² body surface: Decrease second and third doses of pentobarbital by 50mg		

IV: intravenous

placed on Regimen A for the remainder of their chemotherapy courses.

The remaining 10 patients chose Regimen A over B for 14 out of 20 possible selections. (Each patient chose the two best perceived courses of the four courses offered. Thus there were 20 total selections made.) This observation was highly significant ($\chi^2 = 4.9$, 1df) ($p < 0.0268$). Results are shown in Table 2.

The antiemetic effects of the Regimen A and B are compared in Table 3. Patients recorded fewer episodes of severe vomiting on Regimen A than on Regimen B. Objectively, 50% of patients on Regimen A had no vomiting episodes and slept throughout the chemotherapy treatment. This was a significant difference ($\chi^2 = 9.88$, 1df) ($p < 0.0080$). However, when perceived episodes of vomiting were compared with objective assessment, patients receiving Regimen A overestimated the actual number of vomiting episodes. Patients commented that the perceived severity (duration and volume) of vomiting episodes was less on Regimen A.

Side effects of Regimen A versus B are shown in Table 4. Common side effects were sleepiness and dizziness. There appeared, however, to be no significant difference in side effects when pentobarbital was added. No corticosteroid-related toxicity was seen.

Discussion

The results of this study showed that the addition of pentobarbital to a combination antiemetic regimen was found to have significant effect on patient acceptance of cisplatin-induced nausea and vomiting. Patients chose a combination that contained pentobarbital in 70% of the courses. Sleep and the resultant reduction of apprehension towards cisplatin-induced emesis were main reasons patients chose Regimen A. The actual number of patients on Regimen A who did not vomit was significant. In 50% of the courses the objective assessment of its antiemetic effect was complete, most likely because the patient was asleep for a major duration of the chemotherapy.

This study was initially designed to enroll 20 patients, but observers felt apparent marked differences were noted between the two regimens after twelve patients to stop the trial.

Anticipatory nausea and vomiting from psychological conditioning toward chemotherapy can make chemotherapy treatments debilitating to the patient, her family and her healthcare provider.⁴ There was concern by the investigator that the use of intravenous pentobarbital in a "double-blind" study

TABLE 2

CORRELATION BETWEEN REGIMENS GIVEN AND THE TWO PREFERRED COURSES CHOSEN BY PATIENT (CIRCLED)

Patient	Course			
	1	2	3	4
1	B	Ⓐ	Ⓐ	B
2	B	Ⓑ	Ⓐ	A
3	A	A	Ⓑ	Ⓑ
4	Ⓐ	B	B	Ⓐ
5	Ⓐ	Ⓐ	B	B
6	B	Ⓐ	A	Ⓑ
7	Ⓐ	B	B	Ⓐ
8	B	Ⓑ	Ⓐ	A
9	Ⓐ	Ⓐ	B	-
10	B	-	-	-
11	B	Ⓐ	Ⓐ	B
12	Ⓐ	B	Ⓑ	A

(-): Refused further trial and dropped from study

A: Regimen A

B: Regimen B

TABLE 3

VOMITING ASSOCIATED WITH REGIMEN A
VERSUS REGIMEN B
(SUBJECTIVE VERSUS OBJECTIVE ASSESSMENT)

	Regimen A		Regimen B	
	subjective	objective	subjective	objective
Vomiting				
No vomiting	6 (27%)	11 (50%)	4 (18%)	1 (4.5%)
1-3 episodes	7 (32%)	4 (18%)	3 (14%)	12 (54.5%)
>3 episodes	9 (41%)	7 (32%)	15 (68%)	9 (41%)
Tot. observations	22	22	22	22

TABLE 4

SIDE EFFECTS: REGIMEN A VERSUS REGIMEN B

	Regimen A	Regimen B
Side effects		
sleepiness	32%	14%
dizziness	36%	27%
dry mouth	27%	23%
anxiety	4.5%	9%
decreased concentration	9%	9%
feeling "high"	9%	9%
feeling weak	27%	32%

would not be truly "blinded" to the patient and healthcare provider because of pentobarbital's potentially rapid sedating effect. Because of the informed consent, patients expected to sleep at sometime during two of the first four chemotherapy treatments. This idea struck the patient as a pleasant

one. Though not actually looked for during the study, nurses often recorded on the data sheet sound patient sleep within minutes after receiving what subsequently was Regimen B. Likewise not all patients slept immediately when given Regimen A. This "placebo effect" of Regimen B helped make the study a double-blind trial.

Patients subjectively had more vomiting episodes than was objectively recorded. This disparity may be explained by nausea and dry heaves experienced upon wakening and perceived by sedated patient as vomiting episodes. Again, patients frequently described these "vomiting episodes" as short in duration and volume.

The results agree with those of Sevin⁵ but disagree with Richards et al⁶ in which only 17% of patients using secobarbital and prochlorperazine had less than three emetic episodes. The difference in results as suggested by Richards may be the intramuscular route of secobarbital administration in their study versus the intravenous pentobarbital used in this study. Also, the addition of dexamethasone to our regimen with its known antiemetic enhancing effect make the comparison between the two studies difficult.

The combination of agents used in this study was not compared with metoclopramide combinations presently used by other authors.⁷ This intent was to analyze pentobarbital's effect in a combination antiemetic regimen previously studied by the author, pentobarbital is not known to have an antiemetic effect by itself. Barbiturate-induced sleep during the administration of chemotherapy was hypothesized to effectively reduce the number of vomiting episodes experienced by the patient and reduce patient's fears regarding the side effects of cancer chemotherapy, making the chemotherapy experience much more tolerable to the patient. Sleep-inducing agents such as pentobarbital added to metoclopramide combinations may enhance their antiemetic effect.

Barbiturate-induced sleep continues to be a safe addition to combination antiemetic regimens. No patient in this study experienced respiratory depression or aspiration. Such findings corroborate what has been previously reported.¹

It is concluded that intravenous pentobarbital-induced sleep when added to a combination antiemetic

regimen is effective in reducing vomiting episodes and providing a more pleasant chemotherapy experience in patients receiving cisplatin containing chemotherapy. This data suggest larger trials with other combination antiemetic regimens that include a sleep-inducing agent, such agents that may be effective are droperidol, haloperidol and secobarbital.

★★★

Keesler AFB, Mississippi (39534-5300)

Acknowledgements

The work reported herein was performed under United States Air Force Surgeon General-approved Clinical Investigation No. 84-047, "Pentobarbital's Effect In a Combination Antiemetic Regimen For Cisplatin Induced Nausea and Vomiting."

The voluntary fully informed consent of the subjects used in this research was obtained as required by AFR 169-6.

The opinions and assertions contained herein are the private views of the author and are not to be construed as official or as representing the views of the Department of the Air Force or the Department of Defense.

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Mississippi State Board of Medical Licensure: Annual Report, July 1, 1987 — June 30, 1988

FRANK J. MORGAN, JR., M.D.

Jackson, Mississippi

THE MISSISSIPPI STATE BOARD of Medical Licensure is the state's legally constituted licensure board of physicians (M.D.), osteopathic physicians (D.O.), and podiatrists (D.P.M.). The Board, which meets bimonthly on the third Thursday beginning in January of each year is composed of nine physicians appointed to staggered terms by the Governor.* The office of the Board of Medical Licensure is located at 2688-D Insurance Center Drive in Jackson.

The Board is responsible for setting policies and professional standards regarding the practice of physicians (M.D.), osteopathic physicians (D.O.), and podiatrists (D.P.M.); considering applications for licensure; conducting examinations for licensure; investigating legitimate drug traffic among medical practitioners under the Uniform Controlled Substances Act, conducting investigations in disciplinary matters involving violations of state and federal laws, probation, suspension and revocation of licenses; considering petitions for terminations of probationary and suspension periods and restoration of revoked licenses; promulgating reasonable rules and regulations necessary to enable it to discharge its functions; and enforcing the provisions of the law regulating the practice of medicine.

The administrative functions of the Board are performed under the direction of its Executive Officer, Frank J. Morgan, Jr., M.D., by seven full-time staff members, including three investigators; an administrative assistant; a licensing officer; an accountant,

and a secretary. The Board of Medical Licensure is supported entirely by licensing fees.

Licensure

Any physician, osteopathic physician, or podiatrist desiring to practice medicine in Mississippi must first obtain a license to do so by contacting the Board. When an inquiry concerning licensure is received, a questionnaire to elicit certain pertinent information is sent to the practitioner. Based upon the information given by the practitioner, a determination is made as to the type of license for which he is eligible. Names of references submitted on questionnaire, as well as the American Medical, Osteopathic, or Podiatric Medical Associations, other states in which the practitioner has been licensed, and hospitals where the practitioner has held staff privileges are sent inquiries. If the information received is favorable, an application is sent to the physician.

Reciprocity/Endorsement

The Board of Medical Licensure may grant licenses to practice medicine without examination as to learning, to graduates in medicine, osteopathic medicine, or podiatry who hold licenses to practice from other states, provided the requirements in such states are equal to those set forth by this Board. In addition, this Board may affiliate with and recognize for the purpose of waiving examination, diplomates of the National Board of Medical Examiners and National Board of Podiatry Examiners in granting licenses to practice in Mississippi.

During FY88, 603 practitioners requested applications for licensure by reciprocity with other states or through endorsement of the examinations given by the National Board of Medical, Osteopathic, and Podiatric Examiners. Based upon these requests,

Dr. Morgan is executive officer of the Mississippi State Board of Medical Licensure.

*Members of the Board during the annual reporting period ending June 30, 1988 were: John R. Shell, M.D., Vicksburg, president; W. W. Walley, M.D., Waynesboro, vice president; Walter H. Rose, M.D., Indianola, secretary; Robert B. Townes, Jr., M.D., Grenada; Charles R. Jenkins, M.D., Laurel; Gilbert R. Mason, M.D., Biloxi; Matthew J. Page, M.D., Greenville; Albert L. Meena, M.D., Jackson; and Paul H. Moore, Sr., M.D., Pascagoula.

251 applications were processed and approximately 4,997 reference inquiries were made by the Office of Medical Licensure to determine the eligibility of applicants for a license in Mississippi.

Following receipt of favorable certificates of training and personal interviews, a total of 206 physicians, nine osteopathic physicians, and four podiatrists were licensed in Mississippi.

In addition, six temporary medical licenses which allowed applicants 30 days in which to complete the necessary requirements for permanent licensure were issued.

Effective July 1, 1982, an amendment to the Medical Practice Act permitted the issuance of temporary licenses to non-resident and retired resident physicians to practice for up to 90 days in licensed youth camps in Mississippi. Four such licenses were issued during FY88. One temporary license was granted a physician who is enrolled in a fellowship of addictionology in the Mississippi State Medical Association Impaired Professionals Program.

Examination

The nationally administered Federation Licensing Examination (FLEX) was adopted as the state's medical licensing examination in 1973. The three-day FLEX is a written objective-type, comprehensive examination which tests applicants in the basic sciences, clinical sciences and clinical competence. Beginning in June 1985, a new FLEX examination was administered which consists of two components. Component I is designed to evaluate measurable aspects of knowledge and understanding of basic and clinical science. Component II focuses on critical abilities and knowledge required for diagnosis and management of selected ambulatory and inpatient clinical problems representing a core of clinical situations frequently encountered by the physicians licensed for the independent practice of medicine. A score of 75 is required on each component for passing. The FLEX is given in June and December of each year, and the dates are set by the FLEX Board of the Federation of State Medical Boards of the United States, of which this Board is a member.

Applicants for licensure by examination are screened in the same way as those seeking licensure by reciprocity. References are obtained and credentials are checked thoroughly. During FY88, 111 applicants were declared eligible and took the examination; 110 passed both components. Those applicants who were successful will be granted licensure upon their submitting documentation of

completion of one year of accredited postgraduate training.

On January 16, 1986, the Board adopted a new regulation which requires physicians seeking licensure by reciprocity to have, within ten years prior to date of application, taken and successfully passed a written medical competency examination approved by the Board. Those applicants who possessed all the qualifications for licensure by reciprocity/endorsement with the exception of having successfully passed a written medical competency examination were required to take and pass Component II of the Federal Licensing Examination in Mississippi. Three applicants made application and took Component II. Two were successful. This regulation was amended on May 1, 1988 to state:

An applicant who otherwise possesses all of the qualifications for licensure by reciprocity/endorsement, but has not been examined for licensure in a ten (10) year period prior to filing his or her application, must pass either Component II of the Federation Licensing Examination (FLEX) or the Special Purpose Examination (SPEX) as administered by and under auspices of the Board, unless the applicant:

- (1) Submits satisfactory proof of current certification by an American Medical Association recognized specialty board or American Osteopathic Association approved specialty board; or
- (2) Submits proof that the applicant's sole purpose for seeking licensure is to serve as the Dean, Chairman of the Department, or Faculty of the University of Mississippi School of Medicine. In such case, a license shall remain in effect so long as Licensee is a member of the faculty of the University School of Medicine.

Beginning in Spring 1988, SPEX was made available for quarterly administration: March, June, September and December. The June and December SPEX administrations are set to coincide with the last day of the respective three-day FLEX administration.

In March 1988 SPEX was administered for the first time in Mississippi; two candidates made application and took SPEX. Both were successful. In June 1988, four candidates made application and took SPEX; all were successful.

The Office of Medical Licensure obtained documentation of completion of postgraduate training in behalf of 124 physicians who passed the June and December 1986 and June 1987 FLEX exami-

nation, and medical licenses were issued to them.

A total of 48 restricted temporary licenses were issued for the period July 1, 1987 through June 30, 1988, to applicants for licensure who entered their first year of postgraduate training at the University of Mississippi Medical Center, Jackson. The temporary licenses permitted them to practice only within the scope of their respective residency training programs at the University.

Limited Institutional Licensure

In addition to licensure by examination and reciprocity, state law also provides for limited institutional licensure which is available only to graduates of foreign medical schools for their employment in state-supported institutions. It was the intent of the law to enable Mississippi institutions to utilize the services of qualified foreign medical graduates during the period necessary for them to meet the requirements for permanent licensure.

Based upon their presenting to the Office of Medical Licensure their original medical diplomas, doc-

umentation of certificates from the Educational Commission for Foreign Medical Graduates (ECFMG), Visa Qualifying Examination (VQE), or Foreign Medical Graduate Examination in the Medical Sciences (FMGEMS), and favorable references, 21 applicants were issued limited institutional licenses to practice in state-supported institutions. In addition, 38 limited institutional licenses were renewed during this period.

Since limited institutional licensure was established in 1971, 340 such licenses have been issued. As of June 30, 1988, a total of 60 of the limited institutional licensees have met all requirements, including passing the FLEX and fulfilling the postgraduate training requirements, and have been issued permanent medical licenses in Mississippi.

Certification and Verification

A practitioner originally licensed in Mississippi by examination who seeks licensure in another state through reciprocity must have his license in this state and the scores he obtained on the licensure

FY88 — REVENUES AND EXPENDITURES

The Board of Medical Licensure is supported entirely by funds collected from the following licensure fees:

SCHEDULES OF FEES — PHYSICIANS, OSTEOPATHIC PHYSICIANS, AND PODIATRISTS

Examinations

Both Components	500.00
Component I	325.00
Component II	375.00
SPEX	375.00

Courtesy Candidate Fee (from other States)	150.00
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Reciprocity/Endorsement	500.00
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Limited Institutional License	200.00
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Annual Renewal	40.00
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Late renewal penalty after June 30	25.00
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Additional penalty each month thereafter	5.00
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Certification of license to another state	25.00
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Temporary license (M.D./D.O. only)	50.00
------------------------------------	-------

Duplicate license	100.00
-------------------	--------

Letters of Good Standing	25.00
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Duplicate Renewal Card	10.00
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THE FY88 BUDGET:

Salaries	261,555.00
Travel and Subsistence	21,446.00
Contractual	152,068.00
Commodities	16,813.00
Capital Outlay Equipment	19,080.00
Subsidies, Loans and Grants	612.00
	<hr/>
	471,574.00

examination certified by this Board to the reciprocating state. Such certifications were made for 408 by the Office of Medical Licensure during FY88 and 97 letters of good standing were completed.

The Board also verified the licensure status of practitioners to health care providers, health insurance carriers, licensing boards of other states, and state and federal law enforcement and regulatory agencies. Approximately 5,000 verifications of licensure were made by this Board during FY88.

Annual Renewal

The license of every physician, osteopathic physician, and podiatrist licensed to practice in the state must be renewed annually. On or before May 1 of each year, an application for renewal of license is mailed to all practitioners licensed by this Board to practice in Mississippi. The application must be completed and returned to the Board along with the renewal fee by June 30.

Based upon information given on the renewal

applications, as of July 1, 1987, there were 5,669 physicians licensed to practice medicine in Mississippi. Of this number, 3,544 resided and practiced in state and 2,125 resided out of state.

A total of 2,492 physicians worked in the primary care specialties, which include family practice, general practice, internal medicine, pediatrics, and obstetrics and gynecology.

On May 1, 1988, 5,892 applications for license reregistration were mailed. As of June 30, 1988, 5,676 practitioners had renewed for the period July 1, 1988 through June 30, 1989; 3,396 practiced and resided in Mississippi and 2,280 resided out of state, but elected to maintain current licensure in Mississippi.

Investigations

Under the direction of the Executive Officer, the Board's three investigators carried out the responsibilities of investigating alleged violations of the Medical Practice Act and the Mississippi Uniform

FY 88 STATISTICS (July 1, 1987-June 30, 1988) MISSISSIPPI STATE BOARD OF MEDICAL LICENSURE

LICENSURE

Permanent Licenses Issued		343
Reciprocity	219	
Examination	124	
Temporary Licenses Issued		48
Limited Institutional Licenses Issued		21
Licenses Certified to Other States		408
Applicants Taking FLEX		111
Applicants Taking SPEX		6
Licenses Renewed		5,676
In-State	3,396	

INVESTIGATIVE

Pharmacies Profiled		433
Investigations Conducted		83
Complaints Received		193
Hearings		4
Revocations	2	
Suspensions	1	
License by Reciprocity Denied	1	
Voluntary Surrender of DEA Certificates		7
Personal Abuse	3	
Excessive Prescribing	4	
Consent Agreements Executed		14
Suspension of License, Suspension Stayed	6	
License Placed on Probation	3	
License Restricted	2	
License Surrendered	2	
License Suspended	1	
Complete or Partial Surrender of DEA Privileges	5	
Voluntary Surrender of Licenses		2

Controlled Substances Act as it applies to medical practitioners. During the fiscal year the Board received 193 complaints regarding alleged violations from various sources including state and federal law enforcement officials, state and federal regulatory agencies, hospital administrators, local and state medical societies, medical licensing boards of other states, health professionals and lay individuals. A total of 83 practitioners or individuals were investigated by the Medical Board investigative staff. In conducting these investigations and inspections a total of 433 pharmacies were profiled throughout the State of Mississippi. Analysis of the 83 investigations revealed 68 practitioners were investigated for suspicious or excessive prescribing of controlled substances, three involved personal abuse of controlled substances, two involved criminal investigations which were primarily in assistance capacities to other agencies, two investigations involved practitioners with mental illness, one investigation involved an illegal practitioner, two involved advertising practitioners and three involved follow-up compliance investigations. Of the 68 investigations involving suspicious or excessive prescribing patterns, 17 of these practitioners were written letters by the Executive Officer warning them against future violation of federal and state laws regarding prescribing of controlled substances. Additionally, 31 urine screens were collected and three audits were accomplished.

As a result of the investigations, 7 practitioners voluntarily surrendered their privileges (DEA Certificate) authorizing them to handle controlled substances. Four of these surrenders involved physicians who were personally abusing controlled substances and three involved physicians who were prescribing controlled substances to patients otherwise than in the course of legitimate professional practice. A total of 20 visits were made to these physicians by the investigative staff.

Disciplinary Actions

Additionally, investigations conducted by the Board resulted in four disciplinary hearings. Following consideration of these matters, two licenses were revoked, one license was suspended and one license by reciprocity was denied.

The Board denied one petition for a re-hearing and held one public hearing wherein it adopted regulations governing the administration, dispensing and prescribing of controlled substances which became effective October 1, 1987. In other actions, the Board temporarily suspended two medical licenses.

There were three petitioners for removal of restrictions from medical licenses; one was granted and two were denied.

In other Board-considered cases, 15 physicians had their controlled substances prescribing privileges partially restored and four physicians were denied permission to reregister with the Drug Enforcement Administration for prescribing privileges. Three physicians were granted reinstatement of their medical licenses, but one of these remains on probation.

Eight applications for licensure by reciprocity were considered individually by the Board because preliminary investigations of the practitioner's credentials revealed possible unfavorable information. As a result, three applications were placed in abeyance, three licenses were granted, one was denied and one physician was requested to appear before the Board.

Entering into Consent Agreements with 14 physicians, the Board placed three medical licenses on probation; six licenses were suspended, with suspension stayed with probationary terms and conditions; restrictions were placed on two licenses; voluntary surrenders were accepted in two agreements and one license was suspended. ★★★

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THE PRESIDENT'S PAGE

DAVID R. STECKLER, M.D.

“No More Medicare Cuts”

IT PROBABLY comes as no surprise in view of the “no taxes” rhetoric of the recent presidential campaign that the Reagan Administration leaves office proposing that the new administration and Congress cut \$5 billion from future Medicare funding. This in addition to the some \$30 billion in cuts made in the program over the past several years.

It is timely for each of us to write our Congressional Delegation and say “no more Medicare cuts!” The proposed reduction would occur primarily in hospital and physician payments. This would be particularly detrimental in a rural state such as ours where payments for physicians’ services have been traditionally low compared to the rest of the country and most hospitals are classified as non-urban, thus receiving lower payments under Medicare’s DRG reimbursement policies.

In concert with our plea for “no more Medicare cuts” let’s also rededicate and emphasize our efforts to practice cost effective medicine. The cost of Medicare Part-B services has been increasing 3-4 times the rate of inflation. Congress, among others, is greatly concerned about this increase. There are many reasons for the increase — the aging of the Medicare population, new and more expensive technology, etc. — but the fact remains that we either provide or order some 75 percent of every dollar spent on health services. It behooves us to become more cost effective and cost conscious — and to demonstrate this to the people who are paying the bill. Does your hospital medical staff for example conduct an economic grand rounds? Do you order that chairlift your Medicare patient saw on TV merely because it’s convenient?

Let’s ask for “no more Medicare cuts” and also demonstrate that we are doing our part to control Medicare costs.

Redirect Charity Hospital Funds To Expand Medicaid, Benefit Poor

I wish the people who are creating the ruckus over the prospect of closing Mississippi's charity hospitals would quit trying to masquerade as friends of the poor. The poor people of Mississippi are not well served medically by these hospitals, which are maldistributed, chronically underfunded, poorly equipped by modern standards and approaching the time when major expenditures will be required to keep them functional.

Only Laurel, Vicksburg and Meridian now have such facilities. While the charity hospitals are viewed by many folks in those communities as valuable local industries, it doesn't seem exactly right in an economic sense for citizens of Clarksdale, for example, to pay taxes which go to support the economy of Laurel while their own hospital has to absorb the losses incurred in treating local citizens who have no resources to pay for health care.

The tax money that everybody spends on health care could be multiplied five times by the federal match if spent on health care for medically indigent citizens through the Medicaid program. If these three cities that have charity hospitals prize them highly enough, the cities and/or counties involved could continue their operation with local funds.

The expansion of Medicaid would lighten the economic burden of running charity hospitals for local city and county governments by increasing their fee for service earnings. Everybody with a conscience, however, has to be concerned about the quality of care people will receive in such facilities in the future.

As for the state of Mississippi, its leaders need to direct their full attention to the difficult task of devising comprehensive programs to help meet the

medical needs of all of its citizens in an affordable fashion. The charity hospitals cannot reasonably be expected to contribute significantly to this quest. They are, indeed, a part of the overall problem.

W. LAMAR WEEMS, M.D.
Jackson, MS

(Ed. Note: Reprinted from the Clarion-Ledger/Jackson Daily News, December 15, 1988.)

Medico-Legal Brief

Private Hospital's Staff Privileges Decisions Not Judicially Reviewable

A decision by a private hospital not to grant a physician staff privileges was not judicially reviewable, the Illinois Supreme Court ruled.

A pediatrician had a working relationship with a group of obstetricians and gynecologists. In January 1984, the ob-gyn physicians were admitted to the hospital's medical staff. The pediatrician applied for staff privileges but was turned down because the pediatrics department did not need another pediatrician with his particular qualifications. He was granted a meeting after which his application was again rejected.

He filed suit charging conspiracy to interfere with his business relationship with the ob-gyn physicians, restraint of trade, and fraud. He claimed that denial of staff privileges should be reviewable as a matter of public policy. The trial court dismissed his complaint, saying that a private hospital has the right to refuse to appoint a physician to its medical staff and that refusal was not subject to judicial review.

An appellate court reversed, holding that courts

(Continued on page 30)

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Drug Controversies Top Year in Medicine 1988

Controversies over drugs — the familiar, the exotic, the dangerous, and the much-needed — dominated the Year in Medicine in 1988.

Other top medical news this past year included some key policy and scientific developments in the ongoing AIDS battle, intensified interest in the scope of misconduct and fraud in science, and renewed debate over euthanasia sparked by an essay in *JAMA*.

The drug debates began with a *New England Journal of Medicine* study suggesting that taking an aspirin every other day can greatly reduce the risk of heart attacks. But the study's caution that aspirin can have serious side effects in certain patients, and word of a related British study that did not offer such positive results, failed to get much attention. The Food and Drug Administration later issued strong cautions to aspirin makers and physicians not to over-sell aspirin's benefits.

A similar controversy followed when *JAMA* published a report suggesting that topical tretinoin (Retin-A), a long-used acne drug, could eliminate some of the wrinkles and other symptoms of sun-aged skin. This seemingly too-good-to-be-true report also caused a surge of media attention and demand for Retin-A. FDA Commissioner Frank Young, M.D., eventually issued a strong statement reminding physicians and patients that the drug's anti-aging effects needed more study.

A related acne drug, oral isotretinoin (Accutane), also was the subject of debate following reports linking its use by pregnant women to a number of cases of birth defects even though the drug is not supposed to be used during pregnancy.

Controversy over the use of drugs — particularly steroids — in sports peaked when Canadian sprinter Ben Johnson was stripped of his Olympic gold medal after testing positive for one of these muscle-building substances. The furor focused new attention not only on the widespread use of these potentially dangerous drugs by professional athletes, who see them as a quick source of muscle bulk and strength, but also their apparent widespread availability to amateur athletes and others.

The FDA responded to demands that it streamline its process of making experimental drugs available to desperately ill patients for whom no other treat-

ment exists. The FDA first announced that such patients would be able to import drugs not yet government-approved, and later announced plans to shorten the existing three-step drug testing process for agents showing promise against serious disease.

"This concept takes into account the need to weigh the risks and benefits of a new drug against the severity of the disease to be treated and the availability or absence of alternative therapies," AMA Executive Vice President James H. Sammons, M.D., said of the FDA proposal to make the three-phase approval process more efficient. "We believe the proposed change affirms free and informed decision-making by patient and physician in cases where a drug with some risks may be preferable to the certain outcome of a disease."

Another drug debate seen in 1988 concerned the cost-effectiveness of a new blood clot-dissolving drug, tissue plasminogen activator, or TPA. At issue was whether TPA, which is much more expensive than streptokinase, is worth the extra cost in treating heart attack patients.

The subject of fraud and misconduct in scientific research was examined in numerous reports in the scientific press and lay media this past year. Some within the scientific community cautioned that the debate not only was overblown but blurred the line between error, which is inherent in the scientific process, and deliberate misconduct. Others argued that the fraud cases underscore the problem of an increasingly competitive system of research funding and advancement that encourages cheating and sloppiness and resists self-correction. The debate was fueled by Congressional hearings and the first-ever indictment of a scientist accused of fraudulently obtaining federal research funding.

Euthanasia, a topic long-discussed in medical and lay circles, received renewed attention with *JAMA*'s publication of the essay, "It's Over, Debbie," in which an unidentified physician appeared to admit to the deliberate morphine-induced death of a young woman dying of cancer. The essay indicated that the physician met the patient for the first time shortly before giving her the injection.

The essay generated a legal debate that nearly dwarfed the discussion that *JAMA*'s editor sought to highlight by publishing it. State prosecutors sought to force the *Journal*, which agreed to publish the essay on the condition that its author not be named,

YEAR IN MEDICINE

(Continued from page 17)

to reveal the physician's identity, contending that a crime appeared to have been committed. Those efforts were rebuffed in court.

Letters to *JAMA* and other published reports overwhelmingly condemned the essayist's self-described actions and largely criticized the *Journal's* publishing decision. The essay itself was attacked as ambiguous and undocumented; questions were raised about whether the author's actions, as described, were sufficient to cause death. There even were suggestions that the essay was fictional.

The AIDS toll continued to mount in 1988, with the Centers for Disease Control's cumulative case total topping 80,000 by year's end. Two major AIDS reports were released in 1988, including that of the Presidential Commission on the HIV Epidemic. Among the panel's more than 700 proposals was a call for strong anti-discrimination safeguards for those infected with HIV, as well as a recommendation for more funding for research, treatment and education. A related report by the National Academy of Sciences' Institute of Medicine also called for additional funding and for AIDS education efforts to become a priority nationwide, not just in "high-risk" areas.

On the research side, there was word that HIV can "vanish" following infection and remain undetectable for years, underscoring the need for more sensitive detection methods. There also were reports confirming the ability of zidovudine (formerly AZT), to greatly improve AIDS patient survival, and studies describing an exciting new animal model for

research on AIDS and other immune system abnormalities — mice into which a human immune system can be implanted.

Other major medical stories in 1988:

- Release of a Harvard study, the Resource-Based Relative Value Scale, proposed as a possible system for reforming Medicare reimbursement to physicians.

- An explosion in consumer demand for oat bran following studies suggesting such soluble fiber could be an inexpensive means of lowering serum cholesterol.

- New emphasis on the shortage of nurses in the nation's hospitals following an AMA proposal to create a new category of health care worker, the Registered Care Technologist, and a federal commission's report on the shortage.

- Concern over the accuracy of Pap smears and other clinical laboratory tests following a Pulitzer Prize-winning series of *Wall Street Journal* articles.

- Debate over the use of fetal tissue and organs from anencephalic newborns in research and therapy.

- Efforts to limit medical residents' on-duty hours and improve attending physician oversight of physicians-in-training.

- Reevaluation of the efficacy of brain implants for the treatment of neurological disorders, particularly Parkinson's disease.

- Final FDA approval, after years of study and experimental use, of topical application of the antihypertension drug minoxidil to treat baldness.

- Appointment of Nobel laureate James Watson to head the massive, federally funded project to map and sequence the human genome.

MSMA's 121st Annual Session

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UMC Announces Faculty Appointments

Four have been named in faculty appointments and promotions in the Schools of Medicine and Health Related Professions and Centerwide at the University of Mississippi Medical Center.

In the Medical School, Dr. Tsunemichi Shiota was named instructor in medicine (research), and Dr. Diane Beebe was promoted to assistant professor of family medicine.

Ann Peden was named assistant professor of health record administration in the School of Health Related Professions.

Centerwide, Dr. David Martin Strick was named instructor in physiology and biophysics.

Dr. Shiota earned the M.D. in 1974 and the Ph.D., in 1981 at Tokyo Medical College, where he was on the medical staff from 1974-1981, instructor in internal medicine from 1981-1987 and lecturer in the Third Department of Internal Medicine since 1987.

Dr. Beebe earned the B.A., cum laude, in 1980 at Ole Miss and the M.D. in 1984 at the University of Mississippi Medical Center. She took her internship and residency at the Medical Center, where she was chief resident in family medicine from 1986-1987. Since 1987, she has been an instructor in family medicine and assistant director of the student division of the department.

Ms. Peden earned the B.A. in 1972 at Ole Miss, the certificate in medical record administration in 1974 at UMC, and the M.B.A. in 1985 at Louisiana Tech University. She was director of the medical record department at St. Francis Medical Center at Monroe, Louisiana from 1975-1977, and has since been on faculty as instructor and assistant professor in medical record science at Louisiana Tech University at Ruston. She also has been assistant director of the medical record administration program there since 1973, and was director of medical record technology from 1981-1985.

Dr. Strick earned the B.S. in 1980 at the University of Toledo at Toledo, Ohio. He took his predoctoral training in physiology at the Medical College of Ohio from 1985-1986, where he earned the Ph.D. in 1988. He has been a postdoctoral fellow in physiology and biophysics at the Medical Center since 1987.

POSTGRADUATE CALENDAR

January

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PERSONALS

BERNARD BLUMENTHAL of UMC made a presentation at the Southern Medical Association meeting in New Orleans.

STEPHANI E. BRUNDAGE of New Augusta has been named a fellow of the American Academy of Family Physicians.

VAN BURNHAN, JR., of Clarksdale recently was recognized for 30 years of continued membership in the American Academy of Family Physicians.

SWAN BURRUS of Tupelo has been elected chairman of the Mississippi Section of the American College of Obstetricians and Gynecologists.

GLORIA BUTLER of Port Gibson has been named a fellow of the American Academy of Family Physicians.

ROBERT COGLAN of Aberdeen has been recertified as a diplomate of the American Board of Family Practice.

C. RON CANNON and T. D. BLANTON of Jackson made a presentation at the Southern Medical Association meeting in New Orleans. Dr. Cannon also presented a paper at the annual meeting of the American Academy of Otolaryngology/Head and Neck Surgery in Washington, and conducted a class on facial plastic surgery at River Oaks Hospital in Jackson.

ROBERT COOK of Hattiesburg has been recertified for membership in the American Academy of Family Physicians.

BERTIN CHEVIS of Bay St. Louis has been elected president of the medical staff at Hancock Medical Center. Other officers are BERTRAND SY, vice-president; CRAIG DAWKINS, secretary; and ANDREW MARTINOLICH, member-at-large.

ROBERT COGLAN of Aberdeen has been recertified as a diplomate of the American Board of Family Practice.

SUMAN DAS of UMC attended a meeting of program directors of Plastic and Reconstructive Surgeons in St. Louis, Missouri.

EDWIN DODD of Jackson presented a paper at the annual meeting of the American Society of Anesthesiologists in San Francisco and spoke at the annual meeting of the Mississippi State Society of Anesthesiologists in Jackson.

WILLIAM EURE of Bay Springs has been recertified as a diplomate of the American Board of Family Practice.

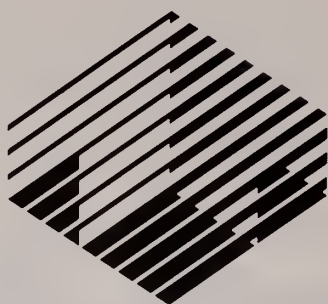
NORMAN D. ERVIN of Columbia has been named a fellow of the American Academy of Family Physicians.

DONALD C. FAUCETT announces the opening of his office for the practice of ophthalmic plastic and reconstructive surgery, cosmetic and reconstructive eyelid, orbital and lacrimal surgery, and ophthalmic oncology at 971 Lakeland Drive, Suite 200, in Jackson.

The Field Memorial Community Hospital in Centerville recently held an open house in celebration of its 60th Anniversary.

JAMES GRIFFITH of UMC presented a paper and conducted a workshop at the 46th annual conference of the American Association for Marriage and Family Therapy in New Orleans.

ARMIN HAERER of UMC was examiner for the American Board of Psychiatry and Neurology in Chicago.



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Tylertown/Wesson

Member FDIC

JOHN B. HICKS of Meridian has been elected to fellowship in the American College of Cardiology.

RICHARD HOLLIS of Amory has been elected chairman of the South Central District of the American College of Obstetricians and Gynecologists.

MARK S. HUFFMAN of has associated with Pathology Associates of Hattiesburg for the practice of anatomic and clinical pathology.

JAMES HUGHES of UMC was guest speaker at the annual Austin Moore Orthopedic Clinic meeting in Columbia, South Carolina.

RONALD KENDIG of UMC spoke at the Pediatric Seminar in Orthopedic Surgery in New Orleans.

RON KRUEGER of UMC presented a paper at a meeting in San Antonio of the Association of Military Surgeons of the United States.

STEVEN LIVERMAN of Wesson has been named a fellow of the American Academy of Family Physicians.

JOSE MADARA, JR. of Booneville was named a fellow of the American College of Surgeons at the 75th convocation of the College in Chicago.

LYNN MCMAHAN of Hattiesburg was inducted into the University of Southern Mississippi Hall of Fame.

F. LAMAR MCMILLIN of Vicksburg has been named a fellow of the American Academy of Family Physicians.

W. E. MOAK of Richton has been recertified as a diplomate of the American Board of Family Practice.

JOHN MORRISON of UMC recently was speaker at a meeting of the Roanoke (Virginia) Ob-Gyn Society.

PHIL NELSON of Jackson has been named a fellow of the American College of Radiology.

BRANTLEY B. PACE of Monticello has been named a fellow of the American Academy of Family Physicians.

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R.H. Morse, M.D.

Medical Director

PERSONALS/Continued

LESSA PHILLIPS of UMC attended a national advisory board meeting of *Modern Medicine* in Nantucket Island, Maryland.

LYNDON PERKINS of Tupelo spoke at a meeting of the Arkansas State Society for Respiratory Care.

SIDNEY PROSSER has associated with the John C. Longest Student Health Center at Mississippi State University.

SESHADRI RAJU of UMC was a member of the faculty for the 15th annual Symposium on Current Critical Problems and New Horizons in Vascular Surgery in New York.

ELDON S. REED has associated with Surgicare of Jackson for the practice of anesthesiology and has been named medical director.

TRAVIS Q. RICHARDSON of Drew has been named a fellow of the American Academy of Family Physicians.

CAROL SCOTT-CONNER of UMC attended an executive council meeting and presented a paper at the Surgical Forum of the American College of Surgeons meeting in Chicago and also made a presentation at Southern Medical Association's meeting in New Orleans.

KELLY SEGARS of Iuka has been recertified as a diplomate of the American Board of Family Practice.

N. E. MURILLO SMITH of Decatur has been named a fellow of the American Academy of Family Physicians.

ROBERT SMITH of UMC attended an executive committee meeting of the American Heart Association in Dallas.

LAMAR WEEMS of UMC was a site visitor at LSU School of Medicine in Shreveport and attended an American Medical Association Ad Hoc committee meeting in Kansas City, Missouri.

WINFRED WISER of UMC presented a paper at the American College of Surgeons meeting in Chicago.

FRANK A. WOOD of Jackson retired from the practice of medicine on December 31.

TRAVIS YATES of Clarksdale has been elected president of medical staff at Northwest Mississippi Regional Medical Center. Other officers are MARSHALL ELLIS, president-elect, and THAD RODDA, secretary.



BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

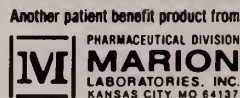
While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by Cs on the other. Issued 1/87

Reference:

1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.








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Summary.
Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci)

Contraindication: Known allergy to cephalosporins

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS

Administer cautiously to allergic patients

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it
- Prolonged use may result in overgrowth of nonsusceptible organisms
- Positive direct Coombs' tests have been reported during treatment with cephalosporins
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in

moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.

- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis

- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include

- Gastrointestinal (mostly diarrhea): 25%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 15%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes
- Transient fluctuations in leukocyte count (especially in infants and children)
- Abnormal urinalysis, elevations in BUN or serum creatinine
- Positive direct Coombs' test
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinistest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly)

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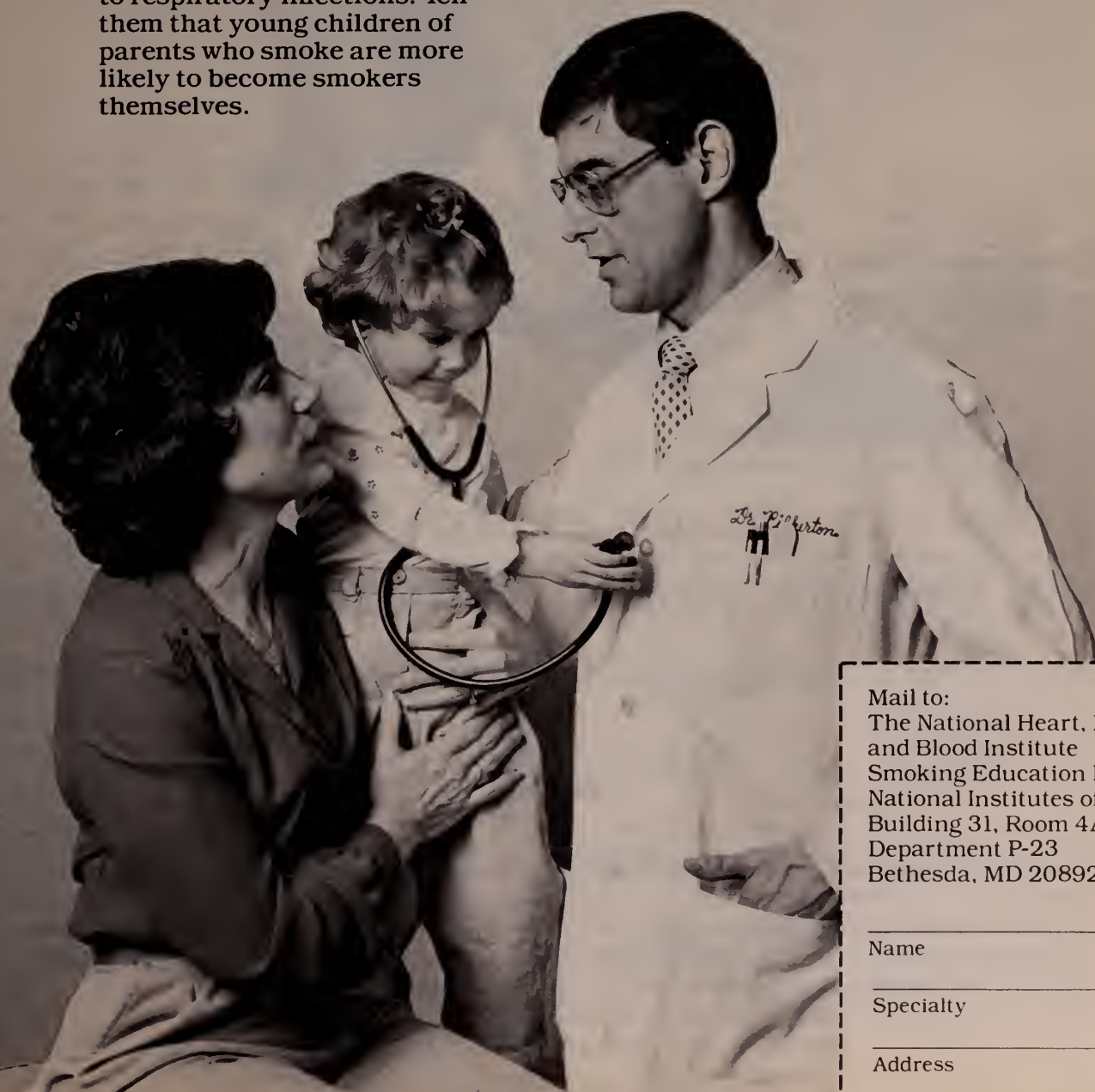
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NEW MEMBERS

BURFORD, SANDRA L., Vicksburg. Born Greenville, MS, Feb. 14, 1956; M.D., University of Mississippi School of Medicine, Jackson, 1985; family practice residency, University Medical Center, Jackson, 1985-88; elected by West Mississippi Medical Society.

FAUCETT, DONALD C., Jackson. Born Beaumont, TX, Nov. 12, 1951; M.D., University of Mississippi School of Medicine, Jackson, 1982; ophthalmology residency, University Medical Center, Jackson, 1982-83 and 1984-87; oculoplastics residency, Duke University, Durham, NC, 1987-88; elected by Central Medical Society.

FLANNERY, AL, Iuka. Born Limerick, Ireland, July 14, 1949; M.D., National University of Ireland, 1973; interned one year, North Charitable Infirmary, Cork, Ireland, 1973-74; family practice residency, National University of Ireland, 1974-76; elected by North Mississippi Medical Society.

HAMILTON, MORRIS R., Gulfport. Born Gulfport, MS, Aug. 20, 1957; M.D., University of Mississippi School of Medicine, Jackson, 1983; interned Miriam Hospital, Providence, RI, one year; medicine residency, same, 1984-86; elected by Coast Counties Medical Society.

JUTRAS, MARK L., Jackson. Born Niagara Falls, NY, Sept. 21, 1955; M.D., University of Texas Medical Branch, Galveston, 1982; interned one year, University of Kentucky, Lexington, 1982-83; ob-gyn residency, same, 1983-86; fellowship, reproductive endocrinology and infertility, University of Minnesota, Minneapolis, 1986-88; elected by Central Medical Society.

MATTHEWS, JOHN MARK, Tupelo. Born Greenwood, MS, Feb. 10, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and medicine residency, Baptist Memorial Hospital, Memphis, TN, 1985-88; elected by Northeast Mississippi Medical Society.

RICKETSON, GREEN H., Natchez. Born Cleveland, OH, Nov. 8, 1944; M.D., Tulane University School of Medicine, New Orleans, 1973; interned one year, Norfolk General Hospital, Norfolk, VA; radiology residency, Medical College of Virginia, Richmond, 1975-78; elected by Homochitto Valley Medical Society.

SALLOUM, NAIM JOSEPH, Hattiesburg. Born Cairo, Egypt, Sept. 12, 1956; M.D., Cairo University Medical School, Egypt, 1980; interned and radiology residency, Methodist Hospital of Brooklyn, NY, 1984-88; elected by South Mississippi Medical Society.

WATSON, DONALD RAY, Brandon. Born Macon, GA, March 12, 1956; M.D., University of Mississippi School of Medicine, Jackson, 1983; interned and orthopedic residency, University of Texas Health Science Center, San Antonio, 1983-88; elected by Central Medical Society.

YARLAGADDA, BURGA PRASAD, Pascagoula. Born Mancharial, India, March 8, 1956; M.D., Gandhi Medical College, Hyderabad, India, 1979; one year internship, Gandhi Hospital, India; pediatric residency St. Josephs Medical, Chicago, 1981-82; anesthesiology residency, Brookdale Medical Center, Brooklyn, NY, 1983-85; elected by Singing River Medical Society.

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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 18-22, 1989, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 121st Annual Session, May 31-June 4, 1989, Biloxi. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39216.

Mississippi Academy of Family Physicians, Annual Meeting, Aug. 2-6, 1989, Gulf Shores, AL. Mrs. Alyce Palmore, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, May, and November. H. S. Barrett, Secy., P.O. Box 1810, Gulfport 39501. Counties: Hancock, Harrison, Stone.

Delta Medical Society, 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSoto County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Emrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Granada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, December. Roger L. Lowery, Secy., 618 Pegram Dr., Tupelo 38801. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. W. A. Spencer, Secy., 2161 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Perrin N. Smith, Secy., P.O. Box 9000, Columbus 39705. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. John J. McClosky, Secy., 3003 Short Cut Rd., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. George R. Bush, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society, 2nd Tuesday, January, March, May, September, October, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Wayne M. Petrie, Secy., 1202 Mission Park Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials for Accreditation of Institutions and Organizations Offering Continuing Medical Education Programs" of the Liaison Committee on Continuing Medical Education. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

Council on Scientific Assembly
Mississippi State Medical Association
735 Riverside Drive
Jackson, MS 39202

North Mississippi Medical Center
830 Gloster Avenue
Tupelo, MS 38801

Forrest General Hospital
Box 1897
Hattiesburg, MS 39401

Mississippi Baptist Medical Center
1225 N. State Street
Jackson, MS 39201

Gulf Coast Community Hospital
4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Box 1488
Natchez, MS 39120

King's Daughter Hospital
Box 948
Brookhaven, MS 39601

Riverside Hospital
Lakeland Drive
Jackson, MS 39208

Biloxi Regional Medical Center
1559 Lafayette St.
Biloxi, MS 39533

Jeff Anderson Regional Medical Center
2124 14th St.
Meridian, MS 39301

Northwest Mississippi Regional Medical Center
Box 1218
Clarksdale, MS 38614

North Panola County Hospital
Drawer 160
Sardis, MS 38666

Singing River Hospital
P.O. Box 112
Pascagoula, MS 39567

Magnolia Hospital
Alcorn Drive
Corinth, MS 38834

Greenwood Leflore Hospital
1508 Leflore Avenue
Greenwood, MS 38930

Gulfport Memorial Hospital
4500 13th Street
Gulfport, MS 39501

Oxford-Lafayette County Hospital
P.O. Box 946
Oxford, MS 38655

St. Dominic-Jackson Memorial Hospital
969 Lakeland Dr.
Jackson, MS 39216

Delta Medical Center
P.O. Box 5247
Crossroads Station
Greenville, MS 39704-5247

Methodist Hospital
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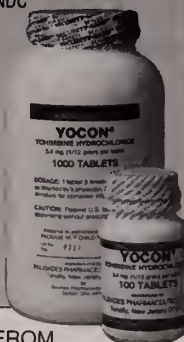
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

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References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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MEDICO-LEGAL BRIEF

(Continued from page 15)

may review such decisions as a matter of public policy to ensure that exclusions are not unreasonable, arbitrary, capricious or discriminatory.

Reversing the appellate court's decision, the Illinois Supreme Court said that the alleged trend toward judicial review of private hospital staff privileges decisions was not as widespread or as compelling as the physician asserted and that special considerations that caused certain other courts to abandon the nonreviewable position did not apply. The court cited provisions from two state laws that granted immunity to physicians, hospitals and their staffs from civil liability for service on peer review or other credential committees. The court said that those laws indicated a general legislative intention that hospitals and medical staffs be free to exercise their professional judgment in the selection and retention of medical staff members. The legislature made an even clearer statement in the Health Finance Reform Act that "it was not the policy of the State of Illinois, to take from medical staffs and hospitals the determination as to the qualifications of practitioners for purposes of granting medical staff membership and privileges."

The court rejected the public policy decision by the appellate court and remanded the case to it for further proceedings. The lower court had not addressed the other claims made by the physician. — *Barrows v. Northwestern Memorial Hospital*, 525 N.E.2d 50 (Ill.Sup.Ct., May 26, 1988)

Editor's Note: A previous decision in this case was reported in THE CITATION, Vol. 55, No. 5, p. 65.

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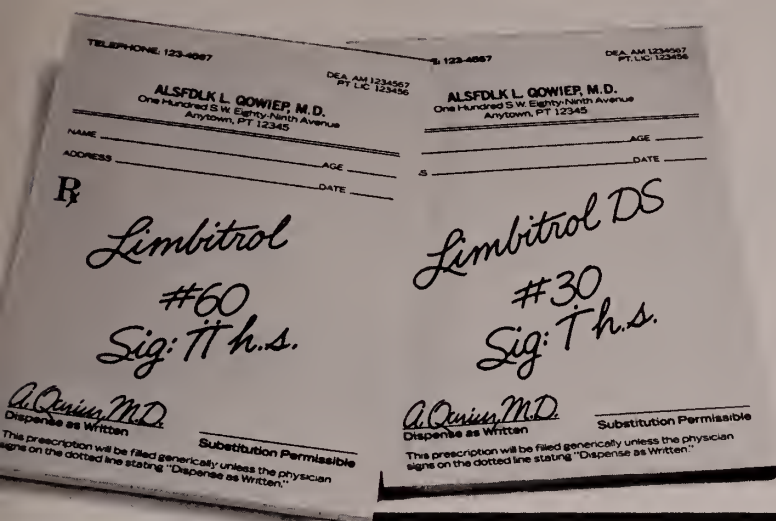
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References: 1. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Feighner VP, et al. *Psychopharmacology* 61:217-225, Mar 22, 1979.

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Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants; concomitant use with MAOIs or within 14 days of monoamine oxidase inhibitors (then initiate cautiously, gradually increasing dosage until optimal response is achieved); during acute recovery phase following myocardial infarction.

Warnings: Use with caution in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur when used with anticholinergics. Closely supervise cardiovascular patients. Arrhythmias, sinus tachycardia, prolongation of conduction time, myocardial infarction and stroke reported with tricyclic antidepressants, especially in high doses. Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: **Cardiovascular:** Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. **Psychiatric:** Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. **Neurologic:** Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. **Anticholinergic:** Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. **Allergic:** Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. **Hematologic:** Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. **Endocrine:** Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Other:** Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

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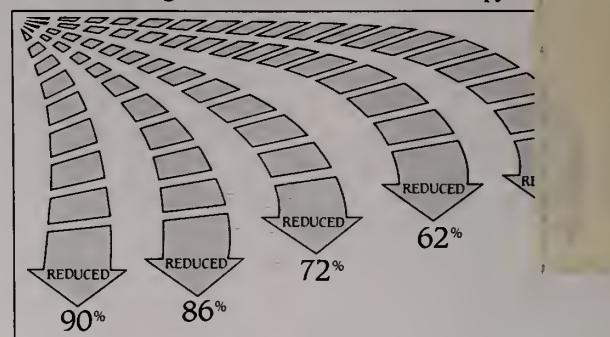
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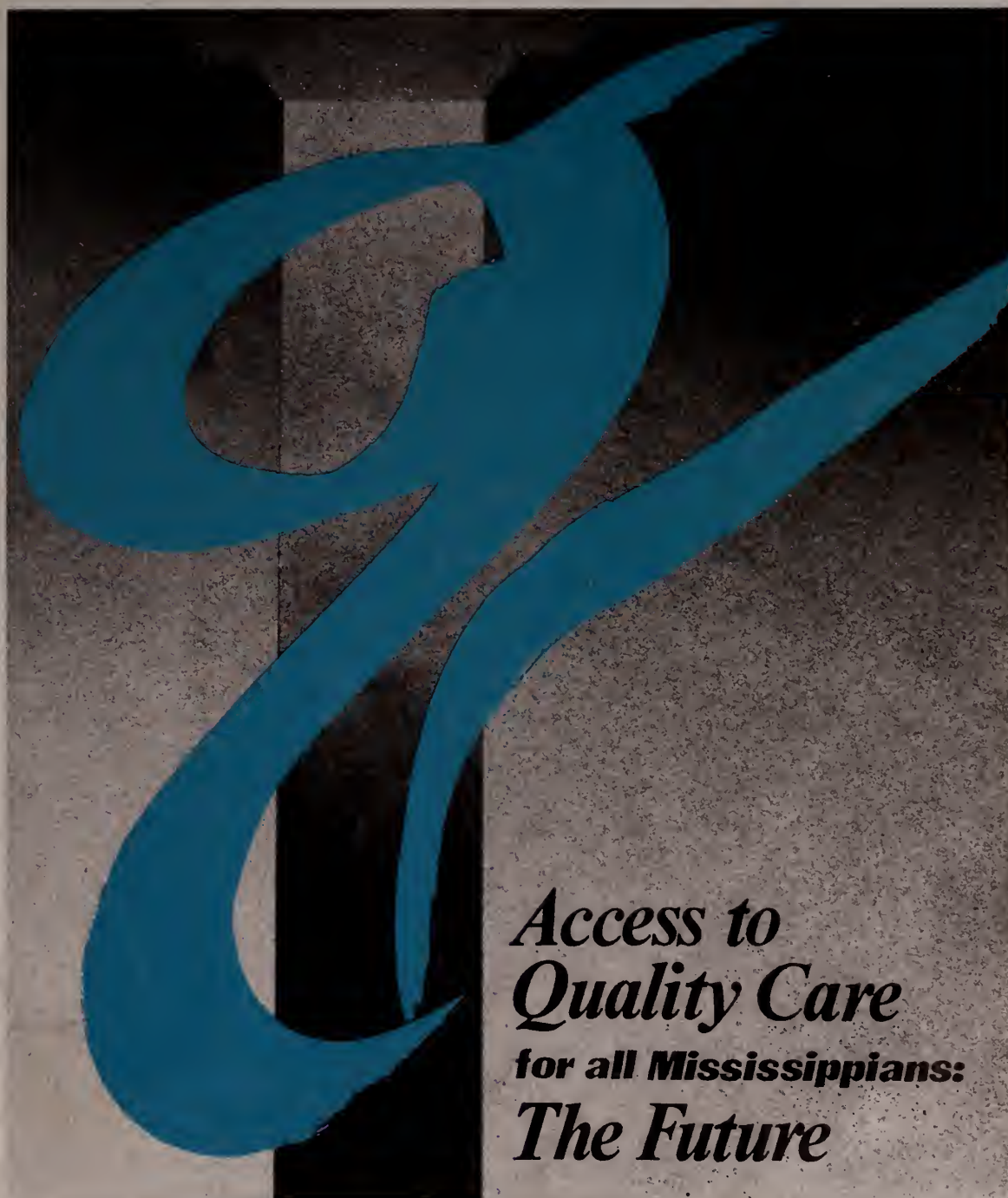
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NEWSLETTER

February 1989

Dear Doctor:

Education has replaced gender as the major sociodemographic predictor of smoking prevalence, say articles in the January 6 issue of JAMA, a theme issue on health risks associated with smoking. Decline in smoking has occurred five times faster among the higher educated, the articles show. The authors predict that if current trends continue, 22% of the U.S. population over the age of 20 in the year 2000 will smoke, compared to 30% in 1985. While less than 10% of college graduates will be smokers, at least 30% of those with no more than a high school education will smoke. They conclude that this widening educational gap suggests that antismoking messages must be based much more on educational status.

Although the health profession's war against "the number one preventable cause of death in the United States" has helped some 1.3 million smokers to quit each year between 1974 and 1985, every year during the early 1980s about 1 million young persons joined the ranks of regular smokers.

Tobacco industry sponsorship of sports events must be halted, AMA Trustee Lonnie R. Bristow, MD, stressed in testimony before the Federal Inter-agency Committee on Smoking and Health. The AMA is pressing for enactment of HR 1271 prohibiting the sponsorship of athletic, artistic, or other events under the brand name of a tobacco product.

Applications are now being accepted for the Hollingsworth Memorial Clinical Research Award. Physicians in private practice or academic medicine are eligible. Deadline is May 1, 1989. For more information, contact the American Heart Association, Mississippi Affiliate, P.O. Box 16808, Jackson, MS 39236-6808.

MARK YOUR CALENDAR NOW...and plan to be in Biloxi for MSMA's 121st Annual Session, May 31-June 4. A full program of scientific, business, and fellowship events is planned.

Sincerely,



Patsy Silver
Managing Editor

Counsel to Authors

THE JOURNAL welcomes manuscripts which should be submitted to the Editors at 735 Riverside Drive, Jackson, MS 39216, in original and at least one duplicate copy. They must be typewritten double spaced on 8½ by 11-inch white paper. **Brief manuscripts (about 2,500 words or 8 pages) will be given preference over longer articles.**

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Titles should be short, specific, and clear. Ordinarily, a title should not exceed 80 characters, including punctuation.

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Manuscripts accepted for publication are subject to copy editing. Authors will receive galley proof prior to publication. Galley proof is only for correction of errors, and text changes

may not be made. The galley proof should be returned by the author within 48 hours from receipt, and no further changes may be made.

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A thesis summary of 75 to 100 words must accompany each manuscript.

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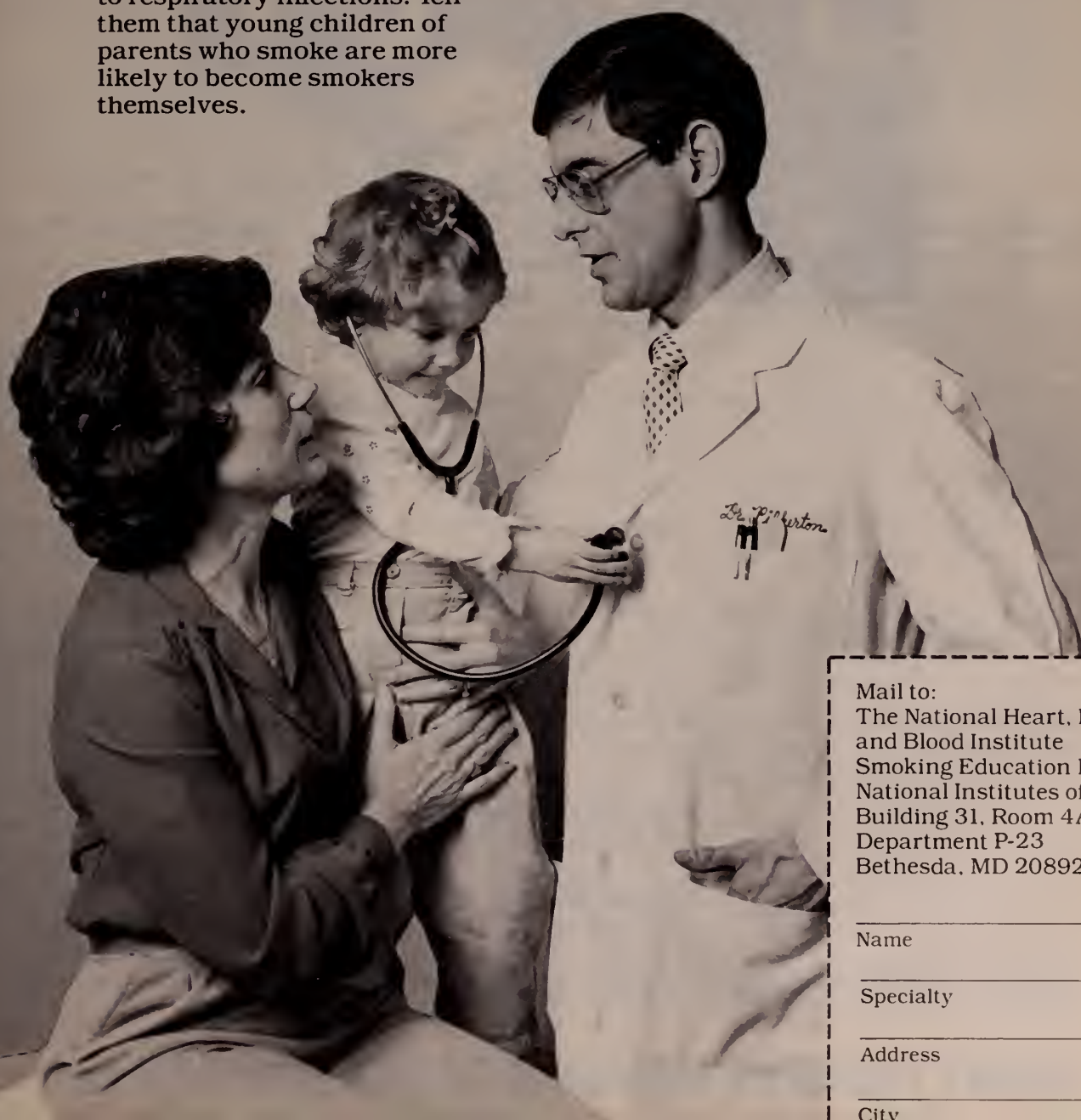
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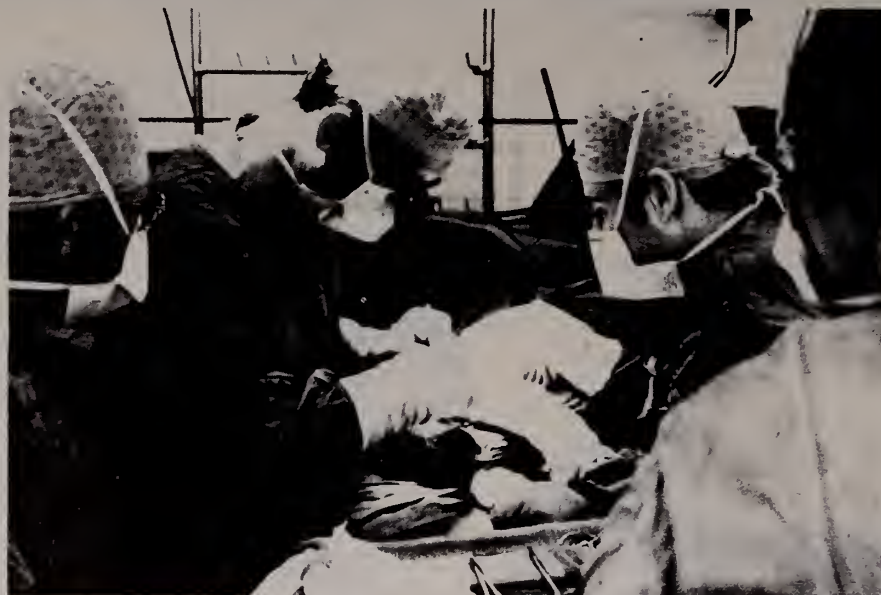
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DATELINE

Scientific Exhibit Deadline Approaches

Jackson, MS - Physicians wishing to apply for scientific exhibit space at MSMA's 121st Annual Session, May 31-June 4, are urged to request space now, while it is still available. Exhibitors are eligible for the Aesculapius Award. To request scientific exhibit space, send a letter to MSMA with the following information: description and title of exhibit, names of exhibitors, and estimated number of linear feet required.

MSMA's "Senior Care" Seeks Physician Volunteers

Jackson, MS - Physicians in the central and southern areas of the state are urged to volunteer for Senior Care, MSMA's program of assistance for qualified medically needy persons. Participating physicians voluntarily accept Medicare assignment for eligible seniors, who have been identified by the MS Council on Aging, the program's co-sponsor. Senior Care now is expanding statewide, after completing a pilot program.

Register Now for Annual Sonic Symposium

Jackson, MS - Biliary lithotripsy, fetal renal anomalies, chromosomal abnormalities, fetal skeletal dysplasia and sonography of the GI tract are among topics for the 10th Annual Spring Sonic Symposium, April 22 in Jackson. The course offers 6 hours Category 1 CME credit. For information, contact Melissa Kelly at the Division of Ultrasound, 1225 North State St., Jackson, MS 39202 or call 968-1329.

"Redesigning Rural Health" Is Conference Theme

Kansas City, MO - "Redesigning Rural Health: Blueprints for Success" is the theme of the 12th Annual National Conference on Rural Health, April 30-May 3 in Reno, Nevada. The program presents clinical sessions of interest to rural health providers along with policy issues and research reports. For information call (816) 756-3140, or write NRHA, 301 E. Armour Blvd., Suite 420, Kansas City, MO 64111.

Services, Products Available from AMA

Chicago, IL - AMA members now are eligible for a free subscription to AMA/NET, the electronic information network for physicians, which previously cost \$135. To receive this free membership benefit, call (800) 621-0660....."HIV Blood Test Counseling: Physician Guidelines" is a brochure available from the AMA, 535 N. Dearborn St., Chicago, IL 60610. Cost is \$2.00 per copy; minimum order is 5 copies.

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Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in

moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.

- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

● Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

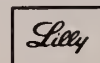
- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthritis, and frequently, fever). 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
 - As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
 - Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypotonia, dizziness, and somnolence have been reported.
 - Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.
- Abnormalities in laboratory results of uncertain etiology**
- Slight elevations in hepatic enzymes.
 - Transient fluctuations in leukocyte count (especially in infants and children).
 - Abnormal urinalysis: elevations in BUN or serum creatinine.
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ORIGINAL PAPERS

Recent Trends in Pulmonary Resection

A. MICHAEL KOURY, M.D.

MARTIN L. DALTON, M.D.

Jackson, Mississippi

RECENT TRENDS in pulmonary resectional surgery include use of limited resection and extending resection to marginal candidates due primarily to the problems encountered in an aging population. In an attempt to assess these trends in our institution, which is a university-affiliated VA Medical Center, we have evaluated 131 consecutive pulmonary resections performed over three years (1984-1987). In this patient population the average age was 64 and there were 130 males and one female. All operations were performed by the Thoracic Fellow of the Department of Surgery, University of Mississippi Medical Center under the aegis of and with the assistance of the senior author.

In a detailed and precise analysis of this group of 131 consecutive pulmonary resections, the following trends were identified.

1. Preponderance of Pulmonary Resectional Surgery for Malignancy

In contrast to years past, when thoracic surgery was primarily performed for tuberculosis, lung abscess, broncho-pleural fistula and bronchiectasis, most pulmonary resections today are performed for malignancy. Of the 131 pulmonary resections, 104 or 79.4% were performed for bronchogenic carcinoma. Thus, the overwhelming majority of pulmonary resections performed in our institution are

for lung cancer. This is certainly the predominant indication for pulmonary resectional surgery at present.¹

An interesting subgroup of patients were found to have dual synchronous bronchogenic carcinomas. Of the 104 patients with lung cancer, four (3.8%) had two primary lung malignancies which occurred simultaneously. Three were unilateral and were resected via lateral thoracotomy. One patient with bilateral lesions was resected via median sternotomy.

In the group of 27 patients who had benign lesions, there were eleven resections for granuloma and ten for various infections. Four patients had localized bronchiectasis causing severe hemoptysis; two of these patients required emergency lobectomy. One patient had a hamartoma and one patient had a lobectomy for massive emphysematous air cysts not amenable to staple plication.

2. Increased Resectability Rate of Carcinoma Patients

Of the 104 patients proven to have bronchogenic carcinoma, 96 proved to be resectable for a 92.4% resectability rate. We believe this high resectability rate is due to a very precise preoperative workup. In addition to an extensive history and physical exam, PA and lateral chest x-ray and fiberoptic bronchoscopy are routine. Sputum studies and skin testing for tuberculosis and fungi have occasionally been

From the Department of Surgery, University Medical Center, Jackson, MS.

done by the Medical Service, but are not part of our routine workup. Following evaluation of this data, if there is a definite discrete pulmonary lesion, a CT scan is obtained. This has become essentially routine for three reasons:

- (1) Precise delineation and exact location of the pulmonary lesion.
- (2) Evaluation of mediastinal adenopathy for staging with an accuracy rate of 80-85%.²
- (3) Delineation of additional pulmonary, cardiac or mediastinal problems which may be undiagnosed.

If the CT scan is positive, that is if a node larger than 1cm is identified, we proceed with mediastinoscopy. If the ipsilateral nodes are positive for non-small cell carcinoma, we proceed with pulmonary resection if there are no contraindications. With positive contralateral nodes, or diagnosis of small cell carcinoma we do not recommend resectional surgery. For lesions of the left upper lobe with left hilar or aortic window nodes on CT scan, we proceed directly with left anterior mediastinotomy (Chamberlain Procedure). If either mediastinoscopy or mediastinotomy is negative, we frequently close that incision, and proceed with thoracotomy for definitive resection. This has worked out very well and spares the patient an additional general anesthetic. We do all mediastinoscopy and mediastinotomy procedures under general endotracheal anesthesia.

Utilizing this preoperative workup only eight of 104 bronchogenic carcinoma patients have proved not to be resectable. In five patients there was major vascular invasion which precluded resection. One patient had diffuse minute pleural metastases and one patient had undiagnosed esophageal invasion. In one patient small-cell carcinoma was diagnosed in a subcarinal node and decision was made not to proceed with pneumonectomy which would have been required. None of these carcinomatous extensions can currently be accurately diagnosed by CT scan. It is hoped that MRI will be useful in this situation in the future.

We are pleased with our resection rate, particularly in view of the fact that prior to development of this preoperative workup, resection was feasible in only 50-60%. Additionally, it is well known that approximately 50% of all bronchogenic carcinoma patients are categorically nonresectable when first seen by a physician. These unfortunate patients have obvious distant metastases and are diagnosed by appropriate scans prior to treatment with chemotherapy or radiation. Thus, of the total cohort of

lung cancer patients, we resect 92.4% of the approximately 50% eligible for surgery or 46.2% of all lung cancer patients seen at our institution.

3. Use of Lesser Pulmonary Resection

In the 96 resections for carcinoma, 71 were treated with lobectomy (74%) and ten were treated with wedge or segmental resection (10.4%). Thus 84.4% of all resections for cancer were lobectomy or less and only 15 patients (15.6%) required pneumonectomy. This again is in marked contrast to resectional surgery in years past.

Following this well defined trend of lesser pulmonary resection, we have extended the use of lobectomy, in patients who otherwise would have required pneumonectomy, by utilization of sleeve bronchoplasty.³ This procedure is indicated when the carcinoma extends from the lobar bronchus into the main bronchus. The lobar bronchus cannot be amputated at its junction with the main bronchus, as is routine, without cutting across tumor. In this instance, a segment or "sleeve" of main bronchus is resected with the lobe and its bronchus. Following resection, the main bronchus is reanastomosed with interrupted vicryl sutures thereby preserving function of the remaining lung on the affected side. Of 71 lobectomy patients treated for bronchogenic carcinoma, seven (9.8%) were treated by sleeve resection. In this group of patients, right upper lobectomy with sleeve resection was performed in four patients, right upper lobectomy and right middle lobectomy with sleeve resection was performed in two patients and left upper lobectomy with sleeve resection in one patient. It is increasingly important to preserve pulmonary function in these elderly patients who have marginal pulmonary reserve. Significantly, there has been no operative mortality in this group of patients and minimal postoperative morbidity.

4. Increased Usage of Median Sternotomy for Pulmonary Resection

Following the landmark article in 1986 by Urschel,⁴ we have increasingly utilized median sternotomy for pulmonary resection. Although it has long been our routine approach for bilateral pulmonary metastases, we are currently using it for elective unilateral as well as bilateral pulmonary resections. Of the 131 consecutive patients, six (4.5%) were operated via median sternotomy. Of the 96 resections for carcinoma, six patients (6.3%) were operated via median sternotomy. In this group of patients, four had bilateral wedge resection for metastases and one had a left upper lobectomy, su-

TABLE 1

CELL TYPE AND OPERATIVE PROCEDURE FOR THE 96 PULMONARY RESECTIONS FOR BRONCHOGENIC CARCINOMA

<i>Cell Type</i>	<i>Wedge/Segmental</i>	<i>Lobectomy</i>	<i>Pneumonectomy</i>	<i>Total</i>	<i>Percent</i>
Adenocarcinoma	3	29	4	36	37.5%
Squamous Cell	1	22	7	30	31.2%
Large Cell	0	15	3	18	18.7%
Small Cell	0	2	0	2	2.1%
Metastatic	6	1	0	7	7.3%
Histiocytoma	0	1	1	2	2.1%
Adenoid Cystic CA	0	1	0	1	1.0%
	10	71	15	96	100%

perior segmental resection of the left lower lobe and six wedge resections of the right lung for bilateral pulmonary metastases. One additional patient had bilateral primary carcinomas and was treated by wedge resection of left upper lobe and right upper lobectomy.

Double lumen endotracheal tubes facilitate operative procedures and in some cases expand the limits of resectability as seen in two of our patients who had tumors within 2cm of the carina requiring excision of the carina and tracheoplasty for complete removal of the tumor which would have been very difficult or impossible with a regular endotracheal tube.

We believe that in the future, because of the diminished postoperative pain as well as the much diminished effect on pulmonary function, that median sternotomy will be increasingly utilized for elective unilateral or bilateral pulmonary resections.

5. Increased Usage of Concomitant Chest Wall Resection

Following our trend of increasing resectability for marginal patients, we have routinely employed en bloc chest wall resection with lobectomy when the carcinomatous extension did not involve major vascular structures or vertebral bodies. Chest wall including ribs, intercostal muscles and overlying muscle are routinely resected when involved with the carcinoma. Of the lobectomy patients treated for bronchogenic carcinoma, five (7.0%) have had concomitant chest wall resection. Of this group, three were en bloc resection with lobectomy and two have had Paulson-Shaw operations for superior sulcus tumors.

6. Adenocarcinoma has Become the Most Common Resected Bronchogenic Carcinoma

In all 96 cases, 36 were resected of adenocarcinoma for a percentage of 37.5%. Squamous cell carcinoma accounted for 31.2% and large cell carcinoma

was diagnosed in 18 patients for 18.7% of the series. Two patients (2.1%) had resection of solitary pulmonary nodules which proved to be small cell carcinoma. Metastatic carcinoma patients have numbered seven (7.3%). One patient had a malignant histiocytoma and one patient had adenoid cystic carcinoma (see Table 1). These percentages correlate well with those reported by Melamed, et al.⁵

Discussion

Preoperative selection of patients continues to be an important aspect of successful pulmonary resectional surgery. In addition to bronchoscopy, CT scan and appropriate mediastinoscopy or mediastinotomy, precise pulmonary function tests are mandatory. Additionally, in patients in whom extensive pulmonary resection is contemplated a split crystal lung scan is routinely accomplished. Following resection we must plan preoperatively that the patient retain an FEV1 of at least 1.0 liter postoperatively. This can be accurately predicted from the combination of pulmonary function tests and split crystal lung study. Utilizing this method we fortunately have not had any patients come to chronic "pulmonary cripple" status in the postoperative period.

Postoperative morbidity in this group of patients has been minimal and we attribute this to frequent and vigorous fiberoptic bronchoscopy. The patient is bronchoscoped in the operating room immediately after completion of the thoracotomy. We find this to be quite helpful in clearing the tracheo-bronchial tree and it is reassuring to know that the patient leaves the operating room without any retained secretions or blood clots. The suture line of the bronchial closure is also inspected. Bronchoscopy is repeated daily or sometimes several times daily in the reluctant cougher and in patients who have retained secretions and simply are not strong enough to cough productively. All patients receive an arterial line preoperatively and this is retained while in the surgical intensive care unit, usually for three days.

Selected patients are monitored with a Swan-Ganz catheter and, of course, all patients are on continuous EKG monitor.

Assessment of mortality in this group of patients reveals some interesting data. In the group of 18 patients treated with wedge resection or segmental resection there were no operative deaths. Four of these patients were treated with median sternotomy for resection of bilateral pulmonary metastases. In the non-resectable exploratory thoracotomy group of eight patients, there were no operative deaths. In the 90 patients treated by lobectomy, there were five operative deaths, for a mortality rate of 5.5%. The deaths of these five patients were as follows: One coagulopathy, one pulmonary embolus, one ruptured abdominal aortic aneurysm (three weeks postoperative in an obese patient with an undiagnosed aneurysm), one early extubation and bronchospasm in the recovery room, and one bronchoscopy-induced hypoxia on the second postoperative day. In the group of fifteen pneumonectomy patients there was one operative death for a mortality rate of 6.6%. Significantly this occurred in the group of four patients who had right pneumonectomy, and there have been no deaths in the eleven patients who had left pneumonectomy. The overall mortality for the entire group was 4.5%.

Summary

The charts of 131 consecutive pulmonary resections were reviewed at the Jackson VA Medical Center and analyzed for trends in etiology, pathology and types of resection. Analysis of this group, as well as follow-up, are presented.

We feel that this review has delineated some current trends in pulmonary resectional surgery and identified some areas for progress in the future. Only by careful assessment of one's work can one evaluate performance and plan for the future.

★★★

2500 North State Street (39216)

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Management of the Patient with Postpartum Hemorrhage

G. RODNEY MEEKS, M.D., Series Coordinator
Jackson, Mississippi

DR. MEEKS: D.H. is a 20-year-old, black female, gravida 1 at 38 weeks gestation. She was admitted in active labor at 4 cm dilation. She had no prenatal complications. Admission blood pressure was 130/90 mm Hg, hematocrit was 34%, and urinalysis was normal. One hour after admission, she was completely dilated at station S + 2 in the LOA position. She was taken to the delivery room where a saddle block anesthetic was administered. She delivered a female infant over a midline episiotomy by low Simpson forceps. The infant weighed 3,475 grams and had Apgar scores of 7 and 8. The lower genital tract was explored and the placenta delivered spontaneously. Total blood loss was 600 cc. The midline episiotomy was closed in a routine fashion without difficulty. Oxytocin (10 units/L) was administered at 125 cc/hr. Did this patient have postpartum hemorrhage?

DR. BALL: Yes. Blood loss in excess of 500 cc after delivery is defined as postpartum hemorrhage. Of course, accurate measurement of blood loss is difficult and often after a normal delivery approximates 500 cc. Therefore, the diagnosis is made subjectively on clinical assessment of an unusual amount of blood loss. This often is considerably more than 500 cc. Bleeding may be brisk or slow. When slow, treatment is frequently delayed because blood loss is at first severely underestimated.

DR. MEEKS: What are common causes of postpartum hemorrhage?

**Panelists: G. Christopher Ball, M.D., Jackson;
J. Brooks Griffin, M.D., Jackson; and C. J.
Sanders, M.D., Tupelo.**

DR. GRIFFIN: Classically, postpartum hemorrhage is defined as early when it occurs in the first 24 hours after delivery and late when it occurs after the initial 24-hour period. Common causes of early postpartum hemorrhage include: uterine atony, reproductive tract lacerations, uterine rupture, retained placental tissue, abnormal placenta implantation, coagulation disorders, and uterine inversion.

DR. SANDERS: Chorioamnionitis, abnormal labor pattern, general anesthesia, grand multiparity, overdistended uterus, precipitous labor, and preeclampsia are predisposing factors to uterine atony.

DR. MEEKS: What are the causes of late postpartum hemorrhage?

DR. BALL: Late postpartum hemorrhage is often associated with abnormal involution of the placental site, retained placental fragments, or a placental polyp. One must consider gestational trophoblastic disease also.

DR. MEEKS: What steps should be taken to prevent postpartum hemorrhage?

DR. BALL: Recognition of predisposing factors will alert the obstetrician to the possibility of postpartum hemorrhage. Nowhere is the adage "an ounce of prevention . . ." more important than in anticipating hemorrhage. The following situations are associated with increased risk of hemorrhage: twins, polyhydramnios, large fetus, grand multiparity, prolonged labor, preexisting anemia or hypovolemia.

mia, placental abruption, intrapartum bleeding, blood dyscrasia, history of previous postpartum hemorrhage, and previous cesarean delivery. In these situations, it is prudent to place an intravenous catheter when the patient begins active labor and to cross-match blood.

DR. GRIFFIN: Following delivery I thoroughly inspect the lower birth canal including the lateral vaginal sidewalls and cervix to insure that no laceration has occurred. Also, I examine the placenta after its delivery to insure that there is no obvious portion of placenta or membrane absent. If the patient can tolerate exploration of the uterus, I manually explore for retained placenta and membranes. All patients should receive some uterine stimulant. This may be administered intravenously or intramuscularly if the patient does not have an IV. I prefer low-dose oxytocin infusion.

DR. MEEKS: Thirty minutes after admission to the recovery room she was noted to have moderate vaginal bleeding. Palpation of the abdomen revealed a boggy uterus, and uterine massage yielded 200 cc of clot. Twenty units of oxytocin in 1000 cc of IV fluid was administered at 125 cc per hour. Approximately 30 minutes later, the patient again had a soft boggy uterus and massage yielded 400 cc of clot. Her blood pressure was 100/50 mm Hg and her pulse was 90 beats per minute. How should this patient be managed?

DR. SANDERS: Several general principles are important. At term, the gravida has a 30% increase in blood volume, which affords a great margin of safety in tolerating significant hemorrhage. Therefore, signs and symptoms of hypovolemia will not appear until a greater blood loss has occurred than in the non-pregnant woman. It is well to remember that bleeding is not reflected by a drop in hematocrit for approximately four hours unless the hemorrhage has been excessive or a large amount of intravenous fluid has been administered.

In addition to the estimate of blood loss, one must follow symptoms and signs. Once blood loss has exceeded 15% of total blood volume, tachycardia is present, the tilt test becomes positive and the patient may experience weakness, dizziness, fall in blood pressure or syncope (see Table 1).

DR. BALL: A large bore intravenous catheter should be placed and administration of intravenous fluid started. Depending on the severity of bleeding, a second IV may be appropriate. If the placenta has not been removed, it should be removed manually and the uterus should be explored. Reexploration of the vaginal sidewalls for lacerations and hematoma is appropriate, as well as inspection of the

TABLE 1
SEVERITY OF HEMORRHAGE¹

Class One:	LOSS OF 15% OF BLOOD VOLUME Modest tachycardia Orthostatic changes: weakness, dizziness, syncope
Class Two:	LOSS OF 10-25% OF BLOOD VOLUME Tachycardia Tachypnea Decreased blood pressure Reduced pulse pressure
Class Three:	LOSS OF 30-35% OF BLOOD VOLUME Cold, clammy, pale Restless, apprehensive Hypotensive, oliguric Metabolic acidosis, respiratory alkalosis
Class Four:	LOSS OF 40-45% OF BLOOD VOLUME Profound hypotension Only carotid pulse palpable Irreversible shock

episiotomy to insure that hemostasis is adequate. Blood should be drawn for complete blood count, platelet count and coagulation studies. An excellent way to determine coagulation status is to place a tube of blood at the patient's bedside and observe speed of clotting as well as clot retraction and consistency. Blood should be cross-matched if not previously done. Bimanual uterine compression and massage and elevation of the uterus out of the pelvis should help with uterine tone. Clearly, the physician must call for assistance. Sufficient staff must be present so that these steps can be accomplished simultaneously. A response to therapy should be seen within 15 minutes. If the uterus does not contract, or if bleeding does not stop, then one must be prepared for additional measures.

DR. MEEKS: This woman did not respond to uterine massage and oxytocin. She was taken to the delivery room and general anesthesia was administered. Her uterus was again noted to be soft, boggy, and distended. Massage of the uterus yielded 200 cc of blood clot. Reexamination of the episiotomy site, vagina, and cervix revealed no significant bleeding and no hematoma. The uterus was well contracted and there was no obvious defect in the uterine wall. There was fullness in the right broad ligament. What should be done now?

DR. GRIFFIN: If the patient does not respond then she is a candidate for curettage with a large curette and uterine packing. Placing a uterine pack requires a moderate amount of skill. The postpartum uterus can accommodate 15 to 20 yards of four-inch gauze. The fundus must be packed tightly. The vaginal fornices must be packed in such a way to apply pressure to the lateral vaginal sidewalls and to el-

evate the uterus out of the pelvis. Prostaglandin derivatives, especially 15 methyl PGF₂-alpha, may significantly reduce bleeding by increasing uterine tone. Bleeding should be under control completely within one hour. If the bleeding fails to respond within one hour, one must consider further intervention.

DR. MEEKS: Curettage revealed normal-appearing decidua. Approximately 20 yards of gauze were packed in the uterus and vagina. The patient was awakened and returned to the recovery room. The patient became light-headed and dizzy when she sat up. Her blood pressure was 80/60 mm HG and pulse was 100 beats per minute. Low-dose oxytocin and IV fluids were administered at 200 cc/hr. Two hours later the abdomen became distended and tender. Her hematocrit was 28%. What should be done at this time?

DR. SANDERS: A decision must be made regarding exploratory laparotomy. While this decision requires clinical acumen, continued bleeding and unstable vital signs would make me proceed. I am concerned about an occult uterine rupture, particularly since she has fullness in the broad ligament and abdominal distension and tenderness. This woman is a para I and every effort should be made to save her uterus. I would proceed with exploratory laparotomy.

DR. MEEKS: What type incision is best?

DR. BALL: A midline incision allows better exposure as well as being less time consuming. I would first look specifically for a uterine tear and, if present, try to repair it.

DR. MEEKS: The patient was explored through a lower midline incision. Blood was present in the peritoneal cavity. The blood was aspirated and the bowel packed. An approximately 5 cm tear was noted in the lower uterine segment. The tear extended through the uterine vessels on the right side and a broad ligament hematoma was present. Can surgical management conserve the uterus, or should the uterus be removed?

DR. GRIFFIN: Every attempt should be made to repair the laceration and preserve the uterus. If the bleeding could not be controlled by simple repair of the tear, one should consider hypogastric artery ligation as well as ovarian artery ligation in an effort to control hemorrhage.

DR. SANDERS: If she were not concerned with preservation of reproductive potential, I would perform hysterectomy. I would especially consider it if she desired tubal ligation or if she were a grand multiparous woman.

DR. BALL: Antibiotic therapy should be started

TABLE 2
MANAGEMENT OF POSTPARTUM HEMORRHAGE²

Step 1.	IMMEDIATE THERAPY
	1. Obtain hematocrit, cross-match blood
	2. Manual uterine exploration
	3. Bimanual uterine massage
	4. Dilute oxytocin infusion
	Response should occur within 15 minutes
Step 2.	PRE-LAPAROTOMY THERAPY
	1. PGF ₂ alpha analogues
	2. Curettage
	3. Uterine and vaginal pack
	Response should occur within 1 hour
Step 3.	LAPAROTOMY
	1. Repair uterine rent
	2. Hypogastric artery ligation
	3. Uterine artery ligation
	4. Ovarian artery ligation
	5. Hysterectomy

irrespective of any other therapy, because of the multiple manipulations, hematomas, and anemia.

DR. MEEKS: The uterine tear was successfully repaired. She required six units of blood and was placed on antibiotics. She had no significant postoperative complications and remained afebrile. Hematocrit immediately postoperative was 25%. She was discharged in good condition on the sixth postpartum day.

Let us change the circumstances and assume that a woman has a late postpartum hemorrhage. What should be done for this condition?

DR. SANDERS: Subinvolution of the uterus and retained secundines are the most common causes of late postpartum hemorrhage. Subinvolution of the uterus is a poorly-healing placental implantation site, which is often associated with large venous sinuses as well as infection. If one suspects subinvolution, treatment with antibiotics and uterine stimulatory agents would be appropriate.

DR. GRIFFIN: If the uterus fails to respond promptly or if the bleeding is heavy, one should consider dilatation and curettage because of the high incidence of retained placenta.

DR. MEEKS: Postpartum bleeding, particularly after an apparently normal pregnancy, labor, and delivery, haunts every obstetrician and is a major cause of maternal mortality. Approximately 4% of the deliveries will meet the strict definition of postpartum hemorrhage which is 500 cc of bleeding or more. Fortunately, hemorrhage severe enough to cause signs and symptoms of hypovolemic shock — generally more than 1000 ml of blood — occurs in only 0.5% of deliveries. Nowhere else in ob-

stetrics is expert judgment, cool organized thinking, and prompt action at a greater premium.

Prevention is the first step in management. Recognizing those patients who are at greatest risk is important. Making appropriate management plans to insure adequate intravascular volume and adequate blood replacement is imperative.

Rapid evaluation of the etiology and degree of hemorrhage is mandatory. Unless one accurately diagnoses the cause of bleeding, it is difficult to establish appropriate management. Uterine atony, the most common cause of postpartum hemorrhage, is often associated with retained placenta or genital tract laceration. Because of this, general measures directed at uterine atony are appropriate first steps for most hemorrhage, especially when no other specific cause is identified. These include administration of appropriate oxytocic agents, exploration of the uterus and birth canal, and massage of the uterine fundus. If these measures fail to control bleeding within 15 minutes, additional therapy should be instituted.

Additional therapy includes surgical intervention. The uterus should be gently curetted and then packed.

If the bleeding still is not controlled or is persistent for more than one hour, exploratory laparotomy must be considered (see Table 2). Treatment can then be individualized based on the findings at the time of exploration as well as the patient's age, parity, and desire for future childbearing. Adequate personnel must be available to perform numerous therapeutic tasks simultaneously.

I would like to thank our panelists for taking time out from their busy practices and making Grand Rounds such a rewarding education experience.

★★★

2500 North State Street (39216)

Acknowledgement

Supported in part by the Vicksburg Hospital Medical Foundation.

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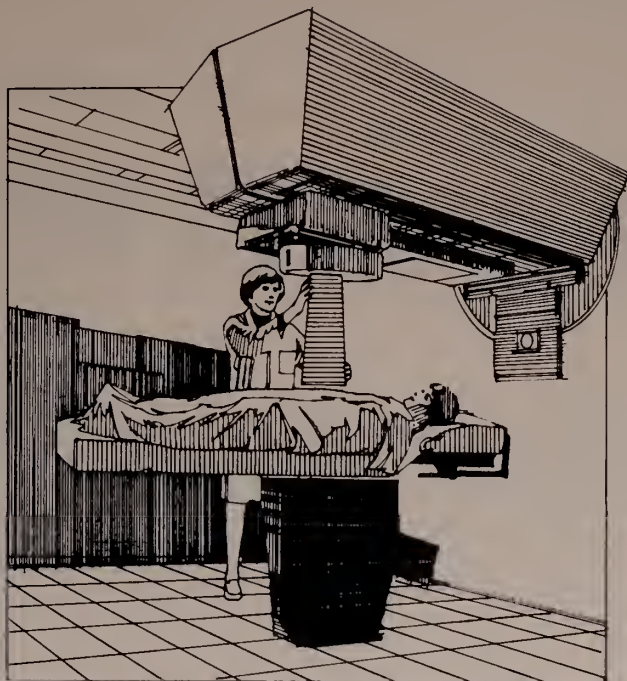
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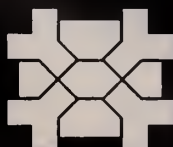
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Access to Quality Care for All Mississippians — The Future

J. EDWARD HILL, M.D.

Hollandale, Mississippi

A GREAT AND URGENT need exists, not for short term solutions, but for definitive, comprehensive, and long-term strategies to impact on access to and the quality of health care in Mississippi. Access to care is the over-riding and predominant issue, and is dependent on many factors, including health manpower recruitment and retention, health provider education, quality issues in delivery of health care, equity in reimbursement to health care providers, the liability climate and tort reform initiatives, and the general economic development of a mostly rural state. Access is limited mainly by economic reality.

I would like to, as briefly as possible, touch on several areas that I think would improve access to quality care for our citizens who are elderly and either under insured, uninsured, or are in the class of working indigent. The areas I will cover include: (a) health manpower needs, (b) rural hospital survival, (c) long-term care for elderly, (d) Medicaid changes, (e) the uninsured, under-insured and working medically indigent, and (f) a private sector program for the Medicare indigent.

Improving Health Manpower in Rural Areas

I think it is well recognized by now that primary care specialists can adequately handle somewhere between 80-90% of all problems that present to the general health care facility. The most exciting potential long-term solution to all of these health care problems is the establishment of teams of health care professionals, particularly in rural areas, that provide a broad range of care. I understand there is federal legislation aimed at a potential solution, and I also know that the American Academy of Family Physicians has committed itself to a very intensive and very dynamic approach to the solution of the access problems, by promoting family practice, particularly in rural areas, to students. The American

"A great and urgent need exists, not for short term solutions, but for definitive, comprehensive, and long-term strategies to impact on access to and the quality of health care in Mississippi."

Academy of Family Physicians in conjunction with the national Rural Health Association and the American Hospital Association's Section on Small and Rural Hospitals is developing a monograph on recruitment and retention of family physicians in under-served areas. Also, a core curriculum guideline is in development for the use in family practice residency programs. Of particular importance is the fact that family practice residents will be taught to utilize the team approach (that is, the health care team) to provide care in under-served areas and to the elderly and indigent. I think federal funding for this type of educational program would continue to experience fewer cutbacks than funding for other education. Also, there is badly needed some kind of financial and tax incentive enticement to promote primary care specialists in rural practices. More equitable payment to practitioners in rural areas is long overdue. An increase in this type of care in the rural regions would be more cost effective and would probably result in higher quality medical care.

Rural Hospital Viability — Hospital Accessibility

Multiple factors are having an impact on the viability of the small and rural hospitals. With the aging of our population, it is very likely that the small community and/or rural hospital could be the focal point for delivery of health care to the elderly in the future. The factors that are having an adverse effect include a small population and tax base and delivery of an increased amount of uncompensated care. Other factors that have an effect on the finan-

Dr. Hill is 1988-89 president-elect of the MSMA. Presented October 20, 1988, before the Subcommittee on Aging, Committee on Labor and Human Resources, U.S. Senate.

"... solutions to these problems will come about by the cooperation of public and private advocates. We must have tenacious advocacy for our citizens as far as health care is concerned."

cial viability of these hospitals include Medicare and Medicaid reimbursement policies, increased competition in the delivery of health care services, and legislatively mandated limits on the innovations by the staffs and administration of these hospitals. I will briefly touch on the more urgent obstructions to the viability of these facilities. In my opinion, the single most important aspect of financial survival of the small rural hospital is the urban/rural differential in payments by Medicare's prospective pricing system. An urban/rural differential was incorporated into the prospective payment system payment rates to account for labor and non-labor cost differences in urban and rural hospitals. On average, this results in federal payments to rural hospitals being 9-27% less than such payments to urban hospitals. For example, a representative of one state in recent testimony before an American Medical Association reference committee states that Medicare reimburses the urban hospitals \$5,300 for patients in DRG 89 (pneumonia), but only reimburses rural hospitals \$2,200 for the patient in this DRG — a 241% differential. Similarly, urban hospitals receive \$4,500 for patients in DRG 127 (heart failure and shock) while rural hospitals only receive \$1,900 for such patients — a 237% differential. Changes in these inequities alone would insure the survival of most of these facilities that are needed. It would also be quite prudent to look at the marked increase in the cost of care for patients in the urban centers if and when the rural hospitals close. I envision the function of the community and small rural facilities in the future being one of a focal point for wellness centers, nursing home care, adult day care, and respite care. It appears to me that this would be a much more cost effective and compassionate manner in which to take care of those elderly and infirm who must be institutionalized.

Financing Long-Term Care

There is increasing concern over how to best finance the growing expenses of long-term care. This concern has been accentuated by the fact that persons over 65 represent the fastest growing segment of our population, and that this group is at the highest risk of incurring chronic illness or disability.

This unprecedented growth in the older population — particularly the 75 plus age group — have a major impact on the nation's health care system. Given the increased pressures for the development of adequate mechanisms for financing long-term care and the fiscal restraints being imposed on the public sector, the private sector will have to develop financing mechanisms in the future. In general, private sector initiatives for financing long-term care will need legislative support. Indemnity insurance plans, managed care approaches, cash accumulation plan, and family support plans are some of the areas that must be explored and expanded.

Medicaid Expansion

The final report of Health Policy Agenda for the American People, an initiative that was put together with the cooperation of 425 representatives from different health related, business, government, and consumer groups, highly recommended uniform national standards for Medicaid eligibility benefits. It was also recommended that Medicaid programs be expanded to the medically needy who are currently eligible.

In our state, in recent years, an executive level committee has recommended the expansion of the Medicaid program to its maximum. The recommendation was very clear in that this would be the most immediate and long-lasting economic benefit concerning health care for citizens of our state. The economic shot in the arm for the state of Mississippi by expanding Medicaid to its maximum would mean, after matching formulas and multiplying factors were applied to the funds, that our economy would receive over a half billion dollars. Along with that expansion of Medicaid would come the expanding of eligibility which would reduce significantly the number of uninsured residents of our state.

Initiatives for Increasing Health Care Coverage

Initiatives have been developed or are in the process of being developed in several states for increasing health insurance coverage for the under-insured and uninsured. These ideas include state risk pools that subsidize health insurance premiums for small employers and individuals, mandatory employer health insurance legislation, and ideas like tax credit plans to encourage small employers to voluntarily provide health premium coverage. I will briefly touch on only one of those initiatives in a single state. The state of Missouri will be voting on a very innovative initiative for uninsured care. This initiative will expand the Medicaid program, thereby boosting their economy through matching funds; it will create

an insurance pool for catastrophic coverage available for anyone; it will provide insurance to people turned away because of pre-existing conditions (that is cancer or AIDS); it will increase Medicaid reimbursement for hospitals, physicians, pharmacies and other providers; and it will provide insurance plans for those who do not qualify for Medicaid and who are within a 150% of the federal poverty level. Premiums will be based on income. This initiative in Missouri will be funded by an earning tax which will be 0.6% for all employers. Corporations that do not offer health insurance will pay a similar tax on net profits.

There are innumerable other plans including multi-employee trusts and group arrangements, arrangements subsidizing premiums for employers with less than 20 employees and also other subsidies with less than 100 employees and plans to help those physically disabled who are working or want to work but need insurance coverage to pay for physical therapy, personal care attendants, wheelchair repair, etc.

Regardless of your philosophical feeling about this type of subsidy, reality dictates that we look at this very carefully and develop programs that would be unique for our own state. It is very likely that successful programs might require national legislative help, changes, or approval. To give you an example of a plan that might require congressional action, let me outline this example. Suppose that every county in the state of Mississippi were to place a certain amount of money into a risk pool. Suppose that each hospital in the state were required to contribute to this risk pool and even that there was a small earning tax that went into the pool. Then let's suppose that employers, for a minimum purchase price, could buy Medicaid coverage for their employees. Perhaps they could purchase a health care coverage at a much lower rate than traditional health insurance coverage thereby insuring a large segment of employees that heretofore have not had any kind of coverage. Perhaps agricultural workers would be a good example of those who could be covered and

may not have coverage now. Certainly, congressional action would have to take place in order for the program to be utilized in such a manner.

MSMA "Senior Care" Plan

In our state, the Mississippi State Medical Association has developed and is implementing a program called the "Senior Care" program. The "Senior Care" program was developed in conjunction with the Mississippi Council on Aging to enable low income Medicare recipients to identify physicians who will be willing to accept Medicare assignments. "Senior Care" is now operating through local Councils on Aging and the MSMA. The program is for low income older persons and Mississippi physicians who will accept Medicare assignment upon presentation of the "Senior Care" card. Even though the 20% co-insurance and the yearly deductible for Medicare patients will still exist, physician members of this program will not likely push for payment of the co-insurance and deductible.

It is our hope that the 20% co-insurance and yearly deductible will be allowed to be waived by the health care financing agency. Congressional persuasion might also be of benefit in having this requirement waived for the Medicare poor. This program is presently being piloted in the Golden Triangle area, the North Delta area, and the Jones County area of Mississippi, and will soon go statewide.

In closing, I would like to emphasize the fact that solutions to these problems will come about by the cooperation of public and private advocates. We must have tenacious advocacy for our citizens as far as health care is concerned. We must have private and government agencies committed to solving these problems and we must have those willing to make selfless sacrifices in order to accomplish these ends. The question is not whether we can afford to make these adjustments in taking care of this significant health care problem, but the question is, can we afford not to? ★★★

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THE PRESIDENT'S PAGE

DAVID R. STECKLER, M.D.

With Compassion and Respect for Human Dignity

I RECENTLY participated in a press conference with the chairman of the Board of Directors of the MS Hospital Association to present the following statement based on action by our MSMA Board of Trustees:

"The Mississippi State Medical Association wishes to express its support for ending state funding of a charity hospital system.

"We do this in the context of urging the state to seek maximum federal matching funds for all monies it spends on health care and in support of a statewide, single level of health care.

"The federal-state Medicaid program provides matching funds for health services, and Mississippi receives almost \$4 for every \$1 it allocates to the program. The Medicaid program is the best funding resource for a statewide, single level of health care to include the medically needy.

"By directing the some \$7 million in state funds going to the charity hospitals into the Medicaid program, the state will have some \$35 million to apply statewide for care of its medically needy citizens. This will both maximize state funds for health care and support the statewide, single level of health care the Mississippi State Medical Association believes should be available to all patients. The Mississippi State Medical Association will support efforts to accomplish this."

The Mississippi Hospital Association presented a similar statement. I have subsequently been amazed to see the reaction to ending the state charity hospital program. This especially after personally experiencing the demise of our Natchez Charity Hospital a few years ago.

I can quite appreciate the concern of residents in the areas of the charity hospitals who are utilizing the hospitals. There was a similar concern in Natchez. The anticipated event of many medically needy persons being unable to access the local health care system concluded in the words of our hospital CEO as a "non-event."

This aside, however, my real amazement comes from what apparently is an expression by many of my colleagues that in 20th century medicine there should be charity hospitals for patients. I have a sense (and a hope) that this expression

(Continued on page 65)

Let's Not Stop with One Successful "We Care Day"

For many years physicians have been urged to more actively participate in political affairs, on both the state and national levels. A large number of the Mississippi State Medical Association members took a giant step toward such direct involvement on Wednesday, January 18.

Most significant was the number and attitude of those present. Physicians from all over the state, some groups arriving by buses, met in Jackson for a special session of the House of Delegates. This was followed by a joint meeting of the Mississippi State Medical Association, Mississippi Hospital Association and Association of Hospital Governing Boards. The combined group then went by bus caravan to the State Capitol, where some 800 people, including more than 400 physicians, met with their senators and representatives. An evening reception for the legislators was equally well attended by members of the associations and their guests.

Issues are important, and many of us had an opportunity to discuss multiple problems with our representatives; but most important was the attitude of those present. Although final actions by the legislature may not reflect all of our desires, this action represented a very positive step by Mississippi State Medical Association members. We hope this attitude and sense of involvement will continue to grow and that our influence will become more meaningful.

To enhance these possibilities, the MSMA House of Delegates is encouraged to recommend an annual meeting and activity of this type during the legislative session.

MYRON W. LOCKEY, M.D.
Editor

All-Day Dinner with Preaching on the Grounds

January 18 was a day to remember for a lot of us here in Mississippi. It seemed to me to be roughly a cross between a camp-meeting, fraternity rush week, and a political rally. It was just real nice being with friends from the state medical headquarters, doctors from all over the state, and some good friends in the Mississippi House and Senate.

I was astounded by the numbers that showed up for the event. I sort of figured on 150 to 200 people to show up, but to have around 800 people blew my mind. There were a lot of nurses, hospital personnel, and spouses. Even my wife, who is not a "political" person, was there . . . and enjoyed it.

It was heartwarming to see so many kindred hearts dedicated to helping medicine in Mississippi and helping our medically needy. It certainly gave me a good feeling about the people in health care in our state.

Mr. Bucky Murphy, in his own efficient way, got us out and in, and back again . . . then to this and that, just like a master lion trainer. The whole day went very smoothly and the people I spoke with afterwards were equally proud of those who put it all together.

Most of all, we told the legislators how we felt and how we hoped they would vote. Best of all, we showed them a united front with our "WE CARE" ribbons to let them know that we really do care! I look forward to the event next year and surely hope to see you there.

Thank God I am a physician in this great state of Mississippi.

JOSEPH E. JOHNSTON, M.D.
Associate Editor

COMMENT

(Editor's Note: The following is a position paper submitted January 18, 1989 by the medical staff of Northwest Mississippi Regional Medical Center and the members of Clarksdale and Six Counties Medical Society.)

Generally we agree with the legislative program of the Mississippi State Medical Association for 1989. However, two points are so important to the quality of and access to medical care, that it was felt necessary to let our position be known and seek support from other groups and citizens who feel likewise so that corrections can be made. Many attempts at tort reform in this state have been made with the only result being a tightening of the noose around the neck of anyone who attempts to care for someone else — whether it be professionally or philanthropically.

It is as if open season had been declared on all medical providers by the Mississippi Legislature. Physicians, nurses, hospitals, technicians, boards of trustees, some Good Samaritans, and other forms of game, both large and small, are being legally sniped at from ambush by anyone who is willing to spend \$10 to file a lawsuit. No matter that the suit has no merit. The time, energy, and money necessary to defend against such claims are still the same. Neither the client nor the lawyer who is on a contingency fee has any more to fear than a hunter being shot by a squirrel.

If this continues, all providers will necessarily discontinue more and more services to more and more people, until very few services will be available to anyone except the most affluent of our society in often distant medical centers.

It is right and just for the citizens of Mississippi to seek tort reform, but it will be difficult or impossible to accomplish this as long as the committees where these bills are assigned are controlled by plaintiff trial lawyers who legislate three months a year and practice law for nine months.

Certainly if physicians can be barred from holding positions on boards of trustees of hospitals where they are serving on the Medical Staff, then practicing attorneys serving on committees having to do with legal matters in the legislature is the most flagrant example of conflict of interest existing today and should be remedied.

It has been said by a defense attorney that tort reform in Mississippi will never pass as long as the

foxes are in the hen house. It is our position that we are again seeking fair and just reform this year. Moreover, if the past problems of committee blockage continue, then we feel we should seek class action relief in the form of a conflict of interest suit against these legislators.

Presently Mississippi is financing three small, substandard and one large, first-class hospital out of the General Fund. Thus, all 82 counties contribute monies equally to these hospitals without regard to proximity, clinical excellence, or desire to utilize their services.

Certainly no one objects to supporting our University Hospital and keeping it in "state of the art" condition so as to continue to educate our medical and paramedical personnel as well as having a tertiary referral center for problem patients regardless of their ability to pay. In addition, its central location in Jackson is ideal for use by all of the populace. We must continue to support it to the fullest.

The three small hospitals, however, present another picture. The charity hospital system in Mississippi was chartered prior to the Civil War and is as outdated as is slavery. The hospitals' locations only in the central and southeast areas of the state have inherent access problems (which is only a minor objection). The care they are able to offer and the fact that they freeze their patient population into the substandard charity system is to be decried. The indigent care available through the mainstream county hospitals is far superior and more practical, even where state of the art facilities and subspecialist care is unavailable, because the patient can be referred up through the system.

We have all heard and read the arguments for closing these hospitals out of fairness to other areas of the state: to save money, to better finance Medicaid, and to bring more of the medically indigent into the mainstream of medicine. We have also heard the emotional pleas of "Save the charity hospitals or the poor people will have no care available." HOGWASH! There are rumors circulating over the state that the people in North Mississippi want them closed. This is untrue insofar as our area is concerned. Most of the counties have been sharing their facilities with the needy for years. It is our position that the General Fund should not be burdened with the selfish desires of local politicians to the detriment of their citizens, and that it is immoral to ask the entire state to support this form of servitude. If the people supporting Mattie Hersey, Kuhn Memorial, and Jones County Charity Hospitals want to continue these present policies for whatever rea-

(Continued on page 58)

MEDICAL ORGANIZATION

Participants Consider "We Care Day" A Success

More than 800 MSMA members, spouses and hospital officials demonstrated their concern about legislation affecting health care in Mississippi when they convened in Jackson on January 18 for "We Care Day."

Sponsored by MSMA, the Mississippi Hospital Association and the Mississippi Association of Hospital Governing Boards, "We Care Day" provided an opportunity for participants to voice their support for bills on tort reform and care of Mississippi's medically indigent.

Following meetings of the policy-making bodies of the MSMA and MHA, the 800 participants boarded buses for a trip to the Capitol, where they discussed with legislators their concerns. An evening reception with legislators provided further opportunity for dialogue.

All except three of MSMA's component societies sent delegations, with North Central Society bringing almost 60% of the membership for the day's activities.



MSMA president David R. Steckler, M.D., second from right, met with Rep. Barney Schoby. They are pictured with some of the health professionals from Adams County who attended "We Care Day."



The standing-room-only audience of over 800 "We Care Day" participants listened attentively to discussions of legislative issues.



Some 800 participants listened to legislative briefings before boarding buses for a trip to the Capitol.



Rep. Bob Short, right, was among legislators who met with "We Care Day" participants in the corridors of the Capitol.



Rep. Ray Vecchio, left foreground, talks with health care professionals who visited the Capitol.



Eight buses delivered "We Care Day" participants to the state Capitol.



Physicians and hospital officials met with legislators in the corridors as well as in offices and chambers.



A few of the "We Care Day" participants were pictured in the Capitol rotunda as they talked with legislators.



Sen. Vince Scoper, right, talked with physicians from the Laurel area, including Dr. John Hassell, left, and Dr. Eric Lindstrom.



The MSMA Auxiliary worked hard to promote a successful "We Care Day." Auxiliary president Ruth Smith and her husband, Dr. D. P. Smith, are pictured as they took their seats in the crowded ballroom.



MSMA past president Pegg Herrington, pictured with her husband Dr. Joe Herrington, as "We Care Day" activities got underway.



Rep. Gary Staples, left, is pictured at his desk with "We Care Day" participants from Jones County. At right is MSMA Auxiliary past president Jo Waites.



Sen. Terry Jordan, center, pauses for a photo with Dr. and Mrs. Dewitt Crawford.



Sen. Clyde Woodfield, left foreground, met with three "We Care Day" participants, including MSMA trustee David Clippinger, M.D., at right.



Sen. Vince Scoper, pictured with Dr. Jimmy Waites of Laurel, who was among MSMA members who participated in "We Care Day."



Dr. Walter Rose, seated, leaves a message on a senator's desk. From left are: Mrs. Lanny Prichard, Dr. Wade Dowell, and Indianola hospital official H. J. Blissett. Below, Dr. Guy Campbell and Dr. Joel Alvis were among MSMA members who visited the Capitol.



Dr. Frank Bowen of Carthage, left, met with Sen. Buddy Bond during "We Care Day" at the Capitol.





The success of "We Care Day" was indicated by the standing-room-only crowd of 800 participants.



Doctor,

Have you ever looked for a different way to say "Thank You," "Congratulations," or "Get Well Soon"?

All of these messages are available, along with memorial tributes, in greeting cards from the MSMA Auxiliary. Each card signifies your donation to the AMA-ERF in the name of a friend or colleague.

For information about AMA-ERF greeting cards for year-round use, contact a member of your local MSMA Auxiliary, or Kathy Carmichael, 106 Colonial Place, Hattiesburg, MS 39401; telephone 268-9642.

Senior Care Program Expanding to Other Areas

Senior Care, sponsored by MSMA and the Mississippi Council on Aging, is expanding into the central and southern regions of Mississippi following a successful pilot program in the Golden Triangle and North Delta areas.

Physicians in those areas are being asked to voluntarily accept assignment for needy Medicare beneficiaries who are eligible for the program.

In adopting the Senior Care program, the MSMA Board of Trustees and House of Delegates described it as representing a principle already existing in the state — that “Mississippi physicians have given and are willing to continue to give compassionate and special consideration to those unable to afford needed care.”

Eligibility for Senior Care is determined by representatives of the area Agency on Aging. When an enrolled person presents the Senior Care identification card at the physician's office, the staff knows that the cardholder has met predetermined criteria for acceptance of assignment and that their name is to be entered on the Senior Care tracking report. The monthly report enables MSMA to monitor utilization of this service by the state's poor elderly citizens.

For more information, contact Lora Lane at the MSMA headquarters office.

Gov. Mabus Declares Poison Prevention Week

During 1988, more than 100 Mississippians died as a result of poisoning. Estimates are that 50 poisoning incidents occur every day in the state.

Gov. Ray Mabus has declared March 19-25 Poison Prevention Week in Mississippi to help make the state's citizens more aware of the need for caution.

A review of cases from the Regional Poison Control Center at the University of Mississippi Medical Center indicates the wide range in age and circumstance of people affected by poisoning:

- babies who chewed on poisonous plants,
- curious toddlers who swallowed brightly colored pills,
- teenagers who ate toxic mushrooms or experimented with dangerous inhalants,
- college students who mixed alcohol with drugs,
- factory workers with corrosive chemicals splashed in their eyes and on their skin,
- homemakers who mixed cleaning agents which

produced harmful vapors,

- farmers and gardeners who failed to follow directions for the safe use of pesticides,
- hunters and hikers bitten by venomous snakes and spiders,
- senior citizens who failed to take prescription medicines according to directions on the label.

Mississippi's poison center is staffed by poison information specialists, nurses, and toxicologists 24 hours a day. Physicians are on call around the clock. They provide current information to both the public and health professionals.

For more information or for personal assistance in a poisoning crisis, call (601) 354-7660 or write: Regional Poison Control Center, University of Mississippi Medical Center, 2500 North State Street, Jackson, Mississippi 39216-4505.

Program Offers Supplementary Counseling for HIV-Positive Persons

Referrals are being sought for a new project that offers and evaluates the impact of ongoing support group counseling for persons who learn they are seropositive for human immunodeficiency virus (HIV) infection. The project, termed “Positive Health,” is directed by Jeffrey A. Kelly, Ph.D., Professor of Psychiatry (Psychology) and Chief of the Division of Psychology at the University of Mississippi Medical Center. It is funded by a grant from the National Institute of Mental Health (NIMH).

Patients who learn that they are HIV positive may face anxiety, fear, isolation, depression, and psychological distress. These problems are compounded because they often sense few sources of social support due to the stigma associated with AIDS. Positive Health will determine if involvement in a carefully-planned mental health followup program can lessen these difficulties.

Most persons in the program will be invited to take part in professionally-led small groups which teach stress and anxiety management skills, the adoption of health promotion regimens, and other psychological coping skills tailored to problems and fears faced by persons who are HIV positive. Detailed education concerning HIV infection, risk behavior reduction, and research developments is included. Others in the program may receive individual sessions in the same areas on an “as requested” basis. All services are provided by clinical psychologists, counselors, nurses, social workers, and other professionals experienced in the needs of seropositive persons. There is no charge for participation. The project's psychological services are in-

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- An appraisal of the furnishings, accounts receivables, and good will,
- An individual to act as your agent.

Perhaps you are wondering about the current condition of your practice and need:

- Consultation on accounts receivables,
- Consultation on billing and collections, or
- Help with staff training.

Perhaps you are planning to start a practice and need help:

- Setting it up,
- Acquiring furniture, equipment and supplies,
- Selecting and training your staff.



Frank Cochran

Perhaps you are considering purchasing an existing practice and need:

- Someone with experience to consult with in the process, or
- Someone to act as your agent.

After 11 years of providing the above services for physicians in West Central Alabama, I have decided to serve all physicians in this capacity. I am available and can assist you with these and many other services related to practice management. For more information, please contact me at 205-556-8457.

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HIV COUNSELING — *Continued*

tended to expand upon, rather than replace, the medical care and counseling ordinarily given to persons who learn they are HIV positive.

To protect confidentiality, participants will be asked to use a code number, not their name, on evaluation questionnaires they complete before and after the project. Hospital medical charts are not maintained for participants, and sessions are conducted in evening hours in a quiet location away from the hospital building. Participants will have contact only with professional staff directly involved with Positive Health.

Persons can self-refer by calling 984-5859. Health care professionals who would like more information or copies of program brochures to make available to their clients or patients should contact Dr. Kelly at the same number.

UMC Announces Faculty Appointments

Six have been named in faculty appointments in the Schools of Medicine, Health Related Professions and Dentistry and centerwide at the University of Mississippi Medical Center.

In the School of Medicine, Dr. Gregory H. Blake was named assistant professor of family medicine.

School of Health Related Professions appointments included Bette Ann Groat, assistant professor of occupational therapy and chairman of the department, and Robert T. Usry, assistant professor of medical technology.

Appointed to the School of Dentistry was Dr. Dwane Hal Dean, assistant professor of diagnostic sciences.

Centerwide, Dr. Michael D. Lundrigan was named assistant professor of microbiology, and Dr. Hun Mo Yang, instructor in physiology and biophysics.

Usry earned the B.S. in 1960 at Jacksonville State University and the M.S. in 1973 at Bowling Green State University. He also attended the U.S. Army Command and General Staff College, the U.S. Army Academy of Health Services, Brooke Army Medical Center School of Medical Technology and took a Tri-science Blood Bank/Immunohematology Fellowship at the U.S. Army Medical Research Lab at Fort Knox, Kentucky. He has held positions as associate biologist with the Southern Research Institute at Birmingham, Alabama; chief of laboratory service for the Sixth Convalescent Center in Viet-

nam; medical technician, medical technologist assistant chief of the blood bank and chief of the blood donor center at Walter Reed Army Institute of Research in Washington, D.C.; clinical laboratory officer with the U.S. Army Hospital at Fort Jackson, South Carolina; chief of the blood bank at Madigan Army Medical Center at Tacoma, Washington; laboratory/blood program staff officer with the U.S. Army Health Services Command at Fort Sam Houston, Texas; administrative director for the Department of Pathology at Saint Mary Hospital at Port Arthur, Texas; and manager and technical director for United Blood Services at Mobile, Alabama. He has been manager of United Blood Services in Jackson since 1987.

Dr. Dean earned the B.S. in 1974 at Oklahoma State University, the D.D.S. in 1979 at the University of Oklahoma, and the M.S. in 1983 at the University of Alabama at Birmingham. He took postgraduate training in oral pathology at the University of Alabama and in periodontics at the Mayo Graduate School of Medicine.

Dr. Yang earned the B.S. in 1976 and the M.D. in 1980 at Korea University. He was a general medical officer with the Masan Military Hospital from 1980-1984. He has been a graduate student at the Medical Center since 1984.

Dr. Hall Assumes New UMC Department Post

Dr. John E. Hall has been named vice chairman of the Department of Physiology and Biophysics at the University of Mississippi Medical Center, effective December 15.

Dr. Hall earned the B.S. magna cum laude, in 1968 at Kent State University and the Ph.D. in 1974 at Michigan State University. He took his postdoctoral fellowship at UMC and was the 1975-1978 recipient of the National Institutes of Health Research Service Award and the 1979-1984 recipient of the NIH Research Career Development Award. He also received the Ernest G. Spivey Research Award of the American Heart Association, Mississippi Affiliate in 1979.

Dr. Hall was appointed instructor in physiology and biophysics at the Medical Center in 1975 and rose through the ranks to assistant professor in 1976, associate professor in 1979 and professor in 1982. A member of the graduate faculty since 1977, he was named director of the graduate program in physiology and biophysics in 1980.

Dr. Blair Batson Recognized at Banquet



Dr. Blair Batson, center, who is retiring as chairman of the Department of Pediatrics at the University of Mississippi Medical Center, was recently recognized for 33 years of outstanding service at a dinner in his honor. With him are Dr. Robert Abney, left, clinical assistant professor of pediatrics at UMC, and Dr. Floyd Denny, professor emeritus of pediatrics at the University of North Carolina at Chapel Hill.

Dr. Owen Evans Named Pediatric Department Head

Dr. Owen B. Evans has been named professor of pediatrics and chairman of the department at the University of Mississippi Medical Center, effective January 1.

Dr. Evans will succeed Dr. Blair E. Batson who retires as chairman on December 31, 1988. Dr. Batson came to the Medical Center in 1955 as its first chairman of pediatrics.

Dr. Evans earned the B.A., magna cum laude, in 1969 and the M.D. in 1973 at Vanderbilt University. He took his internship at the Children's Orthopedic Hospital and Medical Center at Seattle, Wash., and was a Lieutenant in the U.S. Navy Medical Corps from 1974-1976. He took residencies in pediatrics and neurology at Vanderbilt University, and was named assistant professor of neurology and pediatrics there in 1980.

Dr. Evans was appointed associate professor of pediatrics and chief of the Division of Pediatric Neurology at the Medical Center in 1983. He became director of the Child Development Center and the Pediatric Intensive Care Unit in Children's Hospital in 1986, and was promoted to the rank of professor in July, 1988.

Dr. Evans' professional memberships include the Child Neurology Society, Central Mississippi Pediatric Society, American Academy of Pediatrics, American Academy of Neurology, Central Society for Neurological Research, American Medical Association and Mississippi State Medical Association.

COMMENTS (Continued from page 48)

sons, those hospitals should be supported by the counties of location and by a pro rata levy on the counties of residence of the patient users, as well as the funds of their Medicaid patients. Then let the rest of the state continue to take care of their own indigent with a clean conscience.

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NEW MEMBERS

BLANKS, THOMAS S., Gulport. Born Magnolia, MS, May 20, 1954; M.D., University of Mississippi School of Medicine, Jackson, 1979; interned and medicine residency, Baylor University Medical Center, Dallas, 1979-82; elected by Coast Counties Medical Society.

CARR, MARTHA ANN, Biloxi. Born Roanoke, VA, April 1, 1954; M.D., Tulane University School of Medicine, New Orleans, 1980; interned, medicine residency, fellowship in cardiology, Tulane Affiliated Hospital, New Orleans, 1980-87; elected by Coast Counties Medical Society.

COOPER, JOHN ROSS, Greenwood. Born St. Louis, MO, Oct. 19, 1942; M.D., University of Iowa College of Medicine, Iowa City, 1967; interned and diagnostic radiology and cardiovascular radiology fellowships, University of Oregon Medical School, Portland, 1967-1974; elected by Delta Medical Society.

FOKAKIS, ARTHUR N., Hattiesburg. Born Hattiesburg, MS, Aug. 21, 1946; M.D., University of Mississippi School of Medicine, Jackson, 1979; interned and medicine residency, USAF Medical Center, Keesler AFB, MS, 1979-82; allergy/immunology fellowship, Wilford Hall USAF Medical Center, Lackland AFB, TX, 1982-84; elected by South Mississippi Medical Society.

GRANT, FRED Y., Meridian. Born Meridian, MS, Sept. 4, 1953; M.D., University of South Alabama School of Medicine, Mobile, 1979; interned, 1979-81, Druid City Hospital; ob-gyn residency, Carraway Methodist Hospital, Birmingham, AL, 1981-84; elected by East Mississippi Medical Society.

HARRIS, DAVID A., Biloxi. Born New Rochelle, NY, July 17, 1956; M.D., University of Mississippi School of Medicine, Jackson, 1982; interned and anesthesiology residency, University Medical Center, Jackson, 1982-85; elected by Coast Counties Medical Society.

HOWELL, MICHAEL G., Ashland. Born Jackson, MS, July 29, 1955; D.O., University of Health Sciences, College of Osteopathic Medicine, Kansas City, MO, 1985; interned, one year, University of Tennessee, Knoxville; elected by North Mississippi Medical Society.

HUMBLE, ROBERT LEE, Vicksburg. Born Monroe, LA, Aug. 11, 1955; M.D., Louisiana State University School of Medicine, Shreveport, 1982; interned and urology residency, Louisiana State University Medical Center, Shreveport, 1982-88; elected by West Mississippi Medical Society.

KRONFOL, N. O., Greenville, MS. Born Beirut, Lebanon, July 29, 1950; M.D., American University of Beirut Medical School, Lebanon, 1975; interned and medicine residency, American University Hospital, Beirut, Lebanon, 1975-77; renal fellowship, Medical College of Virginia, Richmond, 1977-80; elected by Delta Medical Society.

MAHAFFEY, EARL LESLIE, Jackson. Born Jackson, MS, Oct. 15, 1952; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned and family practice residency, University Medical Center, Jackson, 1984-87; elected by Central Medical Society.

WATERER, REBECCA JOY, Whitfield. Born Amory, MS, Jan. 27, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and medicine residency, University Medical Center, Jackson, 1985-88; elected by Central Medical Society.



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PERSONALS

ORLANDO ANDY of UMC made presentations at the Pavlovian Society meeting in Orlando, Florida, and the Eastern Association of Electroencephalographers meeting in New York.

JERRY ADKINS of Biloxi has been named to the Biloxi School Board.

BLAIR BATSON of UMC was examiner for the American Board of Pediatrics in Chapel Hill, North Carolina.

ROBERT J. BERG of Meridian has received a three-year appointment as Cancer Liaison Physician for the American College of Surgeons' Commission on Cancer.

C. RON CANNON of Jackson has been invited to serve as a peer reviewer for the journal "Family Practice Recertification."

GREGORY CHILDREY of Columbus completed an Advanced Laser Surgery workshop and received certification by the Houston Laser Institute of Houston, Texas.

ROBERT C. CLINGAN has associated with The Street Clinic of Vicksburg for the practice of dermatology.

MARION COCKRELL of Ocean Springs has been named chief of staff at Ocean Springs Hospital.

JAMES W. COOK of Vicksburg has been named a fellow of the American College of Surgeons.

C. RALPH DANIEL, III, of Jackson gave two talks on nail disorders at the annual meeting of the American Academy of Dermatology in Washington, DC.

MARK A. DENAPLES announces the opening of an office for the practice of neurosurgery at 3491 Bluecutt Road in Columbus.

SAM DENNEY announces the opening of his office for the practice of medicine and general surgery at Vardaman Medical Clinic in Vardaman.

OWEN EVANS of UMC was visiting lecturer at Mexia State School in Dallas.

STEVEN B. FINEBURG of Pascagoula has been named chief of staff at Singing River Hospital.

NINA GOSS-MOFFITT of UMC has been installed as president of the Mental Health Association of the Capital Area. She also received the Kitty Mitchell

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PERSONALS/Continued

Award from the organization as the outstanding volunteer of the year.

C. E. GUICE, III of Hattiesburg has been inducted into the American College of Surgeons.

JAMES HUGHES of UMC taught the AO Basic course in Davos, Switzerland and attended a North American AO committee meeting in Philadelphia, Pennsylvania.

NEAL HURT of Indianola has been recertified as a diplomate of the American Board of Family Practice.

SAMUEL JOHNSON of UMC was a site visitor at the Missouri Lions Eye Research Foundation in Columbia.

WILLIAM KELLUM of Tupelo was elected president of the Mississippi Thoracic Society at its annual meeting.

DOUGLAS C. LANIER, JR. of Gulfport has been appointed by Governor Ray Mabus to a seven-year term on the governing board of the Department of Mental Health.

ERIC LINDSTROM of Laurel has been elected president of the Jones County Community Hospital Board.

GREGORY S. MARANTO of Meridian has been certified by the American Board of Pediatrics.

J. S. MCILWAIN, JR. of Clinton and JAMES L. MCCLAIN of Jackson have been certified by the American Board of Quality Assurance and Utilization Review Physicians.

WILLIAM M. MCKELL of Pascagoula has published a cookbook entitled, "Mississippi Meals Plain and Fancy."

MALCOLM MOORE and NELL C. MOORE of Tupelo recently were recognized for 25 years of continued membership in the American Academy of Family Physicians.

HOWARD NICHOLS of UMC was examiner for the American Board of Pediatrics in Chapel Hill, North Carolina.

SHANTI PANDEY of Fayette has been recertified as a diplomate of the American Board of Family Practice.

ANDREW PARENT of UMC was moderator for a scientific session at a meeting of the American Association of Neurologic Surgeons in Phoenix, Arizona.

RICHARD E. RODEN of Jackson has been appointed by Governor Ray Mabus to a seven-year term on the governing board of the Department of Mental Health.

E. E. ROBINSON, JR. of Meridian announces his retirement from the practice of medicine.

JOSEPH D. SIEFKER of Meridian has been named a diplomate of the American Board of Otolaryngology.

BARBARA H. SMITH announces the opening of her practice of anesthesiology at Greenwood Leflore Hospital.

TATE THIGPEN of UMC spoke at a symposium in Guadeloupe, French West Indies.

DAVID THOMAS of UMC presented a paper at a meeting of the Gerontology Society of America in San Francisco.

RICHARD VISE of Meridian recently spoke at a meeting of the Newton Rotary Club.

FRAZIER WARD of UMC was guest speaker at the Orthopedic Symposium at the Maine Medical Center in Portland.

THOMAS WEEKS has associated with The Vicksburg Clinic for the practice of gynecology and obstetrics.

**121st Annual Session
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Medico-Legal Brief

\$9 Million Awarded for Negligence In Delivery of Infant

An award of \$9,000,000 against a hospital for negligence in an infant's delivery and postdelivery treatment did not shock the sense of justice, the Connecticut Supreme Court ruled.

On February 25, 1983, the infant had trouble breathing within two or three minutes after delivery. He was severely cyanotic before the physician who delivered him and a nurse were able to connect the needed equipment to administer oxygen. As a result, the child suffered cerebral palsy.

The infant's mother brought a malpractice action on his behalf against the hospital and physician. At the trial, the physician testified that the nurse's and hospital's failure to provide him with appropriate suction and endotracheal tubes and other problems with equipment prevented him from providing oxygen to the infant's lungs as quickly and safely as possible. An obstetrician testified that the nurse's inability to remove a mask from an Ambu bag was a breach of her standard of care and that the hospital's failure to provide proper equipment was a breach of its standard of care.

A pediatric neurologist and neurophysiologist and the child's pediatrician testified that he had choreoathetoid cerebral palsy secondary to a hypoxic ischemic episode around the time of birth or neonatal asphyxia. The hospital's only expert testified that it was the hospital's function to supply delivery room equipment and the nurses' responsibility to make sure that it was available.

The jury decided in favor of the physician but found the hospital liable. It assessed damages in the amount of \$9,000,000.

On appeal, the hospital argued that the verdict was excessive. The Connecticut Supreme Court said that there was ample evidence from which the jury could reasonably conclude that the child's condition was permanent; that he would require constant care for the remainder of his life; that he could never pursue an occupation; that he would need speech, physical, and occupational therapy for the rest of his life, and that he would live a normal life span.

The court pointed out that the total amount for medical expenses to the time of trial, loss of compensation, and cost of home health care was \$5,892,694, or almost two-thirds of the entire award. The court concluded that the award fell somewhere within the necessarily uncertain limits of just damages and did not shock the sense of justice. — *Mather v. Griffin Hospital*, 540 A.2d 666 (Conn.Sup.Ct., April 19, 1988)

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Review A Book

The following books have been received by the JOURNAL MSMA. Members of MSMA interested in reviewing one of these volumes should address requests to the Editor. After submitting a review for publication, you may keep the book for your personal library.

Disease and Distinctiveness in the American South. Todd L. Savitt and James Harvey Young. University of Tennessee Press, 1988.

Medical Mavericks, Volume 1. Hugh D. Riordan, M.D., Wichita, Kansas: The Olive W. Garvey Center, 1988.

POSTGRADUATE CALENDAR

March

NUCLEAR MEDICINE UPDATE

March 4

University Medical Center

SURGICAL FORUM

March 9-11

Holiday Inn Downtown, Jackson

NEUROLOGY SPRING SYMPOSIUM

March 31-April 1

Ramada Renaissance Hotel, Jackson

April

PEDIATRIC ADVANCED LIFE SUPPORT PROVIDER
COURSE

April 6-7

University Medical Center

RENAL UPDATE

April 21-22

Ramada Inn Coliseum, Jackson

SPRING SONIC SYMPOSIUM

April 22

Ramada Renaissance Hotel, Jackson

For more information or a program brochure, contact the University of Mississippi Medical Center Division of Continuing Health Professional Education, 2500 North State Street, Jackson, Mississippi 39216-4505; or call (601)984-1300.

THE PRESIDENT'S PAGE

(Continued from page 46)

in great part comes about because of our frustrations with third party reimbursement, professional liability and other medical socioeconomic issues. The expression is analogous to not seeing Medicaid patients because the reimbursement is too low.

We must continue to address the medical socioeconomic issues facing our profession and the patients we serve. While doing so, however, let us never forget that "a physician shall be dedicated to providing competent medical service with compassion and respect for human dignity." That, by the way, is the first ethical principle of our profession.

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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 18-22, 1989, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 121st Annual Session, May 31-June 4, 1989, Biloxi. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, Aug. 2-6, 1989, Gulf Shores, AL. Mrs. Alyce Palmore, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. H. S. Barrett, Secy., P.O. Box 1810, Gulfport 39501. Counties: Hancock, Harrison, Stone.

Delta Medical Society, 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSota County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Emrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Granada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. David H. Irwin, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. W. A. Spencer, Secy., 2161 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Jack Hollister, Secy., P.O. Box 9000, Columbus 39705. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. John J. McClosky, Secy., 3003 Short Cut Rd., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society, 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Wayne M. Pitre, Secy., 1202 Mission Park Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials for Accreditation of Institutions and Organizations Offering Continuing Medical Education Programs" of the Liaison Committee on Continuing Medical Education. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

Council on Scientific Assembly
Mississippi State Medical Association
735 Riverside Drive
Jackson, MS 39202

North Mississippi Medical Center
830 Gloster Avenue
Tupelo, MS 38801

Forrest General Hospital
Box 1897
Hattiesburg, MS 39401

Mississippi Baptist Medical Center
1225 N. State Street
Jackson, MS 39201

Gulf Coast Community Hospital
4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Box 1488
Natchez, MS 39120

King's Daughter Hospital
Box 948
Brookhaven, MS 39601

Riverside Hospital
Lakeland Drive
Jackson, MS 39208

Biloxi Regional Medical Center
1559 Lafayette St.
Biloxi, MS 39533

Jeff Anderson Regional Medical Center
2124 14th St.
Meridian, MS 39301

Northwest Mississippi Regional Medical Center
Box 1218
Clarksdale, MS 38614

North Panola County Hospital
Drawer 160
Sardis, MS 38666

Singing River Hospital
P.O. Box 112
Pascagoula, MS 39567

Magnolia Hospital
Alcorn Drive
Corinth, MS 38834

Greenwood Leflore Hospital
1508 Leflore Avenue
Greenwood, MS 38930

Gulfport Memorial Hospital
4500 13th Street
Gulfport, MS 39501

Oxford-Lafayette County Hospital
P.O. Box 946
Oxford, MS 38655

St. Dominic-Jackson Memorial Hospital
969 Lakeland Dr.
Jackson, MS 39216

Delta Medical Center
P.O. Box 5247
Crossroads Station
Greenville, MS 39704-5247

Methodist Hospital
P.O. Box 1311
Hattiesburg, MS 39401

RECOLLECTIONS

A glance at old pages of *Journal MSMA* may reveal the truth of the old axiom, "The more things change, the more they stay the same."

Twenty years ago, the growing crisis in professional liability insurance was the focus of editorials and news stories in the February issue, with emphasis on zooming rates and diminishing availability of coverage. It was reported that Mississippi's rates were the lowest in the nation. Also in that 1969 issue, MSMA president Joseph B. Rogers, M.D. deplored severe and restrictive changes in Medicare Part B. He stated, "Any program for financing medical care, private or governmental, . . . must take into consideration the continuing pressures of inflation and the upward spiral of the costs of living. . . . The picture is clear, and there are no dark secrets about the costs of medical care and what constitutes the components of this cost." He concluded, "American medicine recognizes and cheerfully accepts its grave responsibilities, and . . . has every right to full consideration by a government rapidly moving to price a professional service which it does not have to sell."

A news story in that same issue described the first human-to-human heart transplant in the southeastern states, performed at the University of Mississippi Medical Center by a team headed by Dr. James D. Hardy.

Ten years ago, MSMA president Carl G. Evers, M.D. described a just-completed public opinion survey on health care in Mississippi. The survey indicated that Mississippians felt they had good health care and regarded the medical profession as the leadership in improving that care. They had great trust and confidence in Mississippi physicians, ranking them first above other groups such as engineers, college teachers, journalists and lawyers. (They ranked politicians last, just behind labor union leaders.) Dr. Evers pointed to some factors in the survey which suggested possible erosion of the image of the profession, however. State citizens expressed great concern about lack of personal attention by their physicians. They also feared the increasing costs, which they perceived as a barrier in obtaining needed care. Dr. Evers concluded that although the medical profession was still the most respected of all occupational groups, "we can not afford to ignore a growing public dissatisfaction with certain aspects of health care for which only we can administer an effective cure."

"A Sign of the Times!"



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PLACEMENT SERVICE

PHYSICIANS AVAILABLE

PHYSICIAN COMPLETING RESIDENCY in obstetrics and gynecology seeks practice opportunity in Mississippi. Available July 1989. Contact Greg Patton, M.D., 2325 Glenmary Avenue #2, Louisville, KY 40204.

EXPERIENCED PHYSICIAN, seeking licensure, wants position as assistant, Location flexible. P.O. Box 225, Bay Springs, MS 39422.

PHYSICIAN completing residency in general surgery, and spouse (board-eligible pediatrician) seek practice opportunities in Mississippi. Location flexible. Contact Dinesh Ranjan, M.D., 2118 Chantilla Rd., Catonsville, Md 21228.

PHYSICIAN completing residency in psychiatry seeks practice opportunity in Mississippi. Available July 1989. Contact DeBora Murphy, M.D., P.O. Box 53, Vahalla, NY 10595 or call (914) 592-2710.

PHYSICIANS NEEDED

Physicians (especially specialists such as ophthalmologists, pediatricians, orthopedists, neurologists, etc.) interested in performing consultative evaluations (according to Social Security guidelines) should contact the Medical Relations Office. WATS 1-800-962-2230; Jackson, 922-6811; Martina Mayfield (ext. 2276) or Becky Ruggles (ext. 2300).



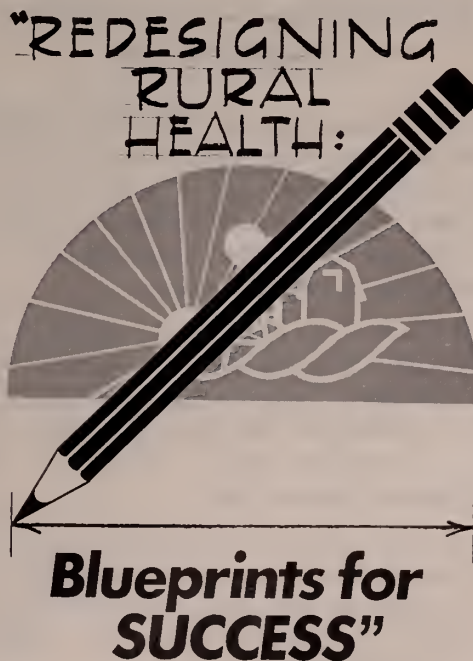
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National Rural Health Association
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PLACEMENT SERVICE/Continued

FAMILY MEDICINE — Tremendous group practice opportunity available for 3 family practitioners in prestigious suburb of New Orleans, LA. Must be BE/BC. '89 residents considered. Supported by 400-bed, full-service hospital. Outstanding compensation/benefits package, including incentives. Contact Don Gustavson, TYLER & COMPANY, 9040 Roswell Rd., Atlanta, GA. Call 404-641-6411.

INTERNAL MEDICINE — Great group practice opportunity for a BC/BE internist in a suburb of New Orleans, LA. '89 residents considered. Leads to early partnership. Supported by 400-bed hospital. Competitive compensation/benefits package. Contact Don Gustavson, Tyler & Company, 9040 Roswell Rd., Atlanta, GA. Call 404-641-6411.

A Commitment to Excellence in Health Care

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HEALTH OFFICER: The Mississippi State Department of Health is seeking a qualified medical doctor to serve as District Health Director for a ten county area surrounding Jackson, Mississippi. This position is responsible to the State Health Officer for administration of public health serving to a population of 500,000. The district has an annual budget of \$12,200,000 and 265 employees. Qualifications for the position in addition to a medical license include speciality training in a primary care field and/or an M.P.H. degree and experience in public health. Salary range is \$54,850 to \$68,312 annually with starting salary negotiable within range. Send resume to: Dr. Alfio Rausa, Medical Consultant, Field Services, Mississippi State Department of Health, P.O. Box 1700, Jackson, MS 39215-1700. EOE

For information about the Journal's placement service or advertising, please contact the Editor, Journal MSMA, P.O. Box 5229, Jackson, MS 39296-5229.

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VASOTEC

(ENALAPRIL MALEATE) (MSD)

Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: **Angioedema:** Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, Drug Interactions and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: **General:** **Impaired Renal Function:** As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Osmotic reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See Drug Interactions.)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: **Patients on Diuretic Therapy:** Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies in pregnant women. VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of 14 C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 298/ patients.

Hypertension: The most frequent clinical adverse experiences in controlled trials were headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

Heart Failure: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, Hypotension); cardiac arrest, pulmonary embolism and infarction, rhythm disturbances; atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), prostatic hypertrophy.

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Other: Muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: **Hypertension:** In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed. If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, Pharmacodynamics and Clinical Effects.) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium < 130 mEq/L) or with serum creatinine > 1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, Heart Failure, WARNINGS, and PRECAUTIONS, Drug Interactions.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg. For more detailed information, consult your MSD representative or see Prescribing Information, Merck.

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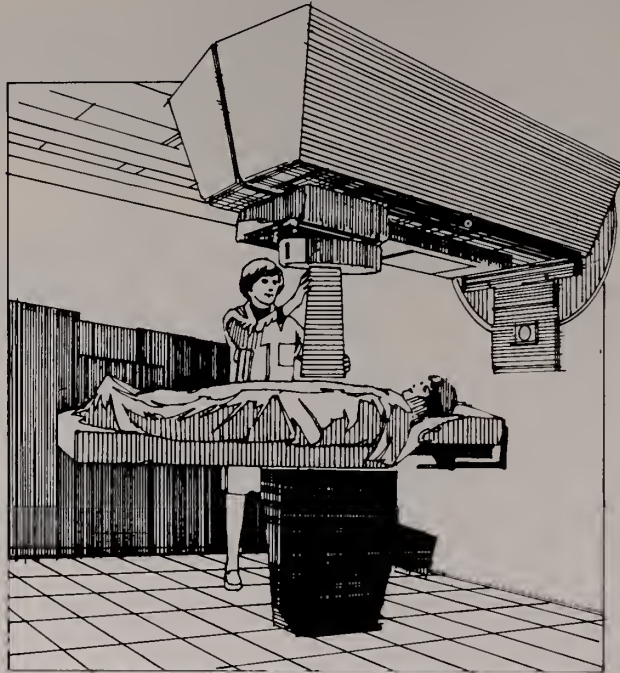
Executive Director

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NEWSLETTER

March 1989

Dear Doctor:

The AMA has persuaded HCFA to back off from plans to drop advance notices to physicians on potential medical necessity denials. HCFA has entered into an agreement with the AMA which commits Medicare carriers to continue and improve the claims development process before issuing any denial letter to patients or physicians.

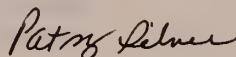
Also, state medical associations are to be consulted when any changes are being considered in Medicare coverage policies by their local Medicare carrier. MSMA members recently received a special mailing on "Medicare's Medical Necessity Guidelines." You are urged to share that information with your claims personnel.

A recent letter from MSMA president David R. Steckler, M.D., urged members in South and Central Mississippi to join with colleagues in the Golden Triangle and North Delta areas in participating in SeniorCare. If you haven't yet responded to that letter, you are urged to do so. SeniorCare is the association's voluntary assignment program for low income Medicare beneficiaries. The program is co-sponsored by the Mississippi Council on Aging, which is determining eligibility under specific guidelines.

This issue of your journal includes new information about the scientific and socioeconomic programs set for the upcoming 121st Annual Session. Be sure to make plans now to attend, so you won't miss the outstanding speakers and timely discussions. This is one of your opportunities to participate in your association's policy making. Plan to bring your family, too, because the program includes plenty of other activities.

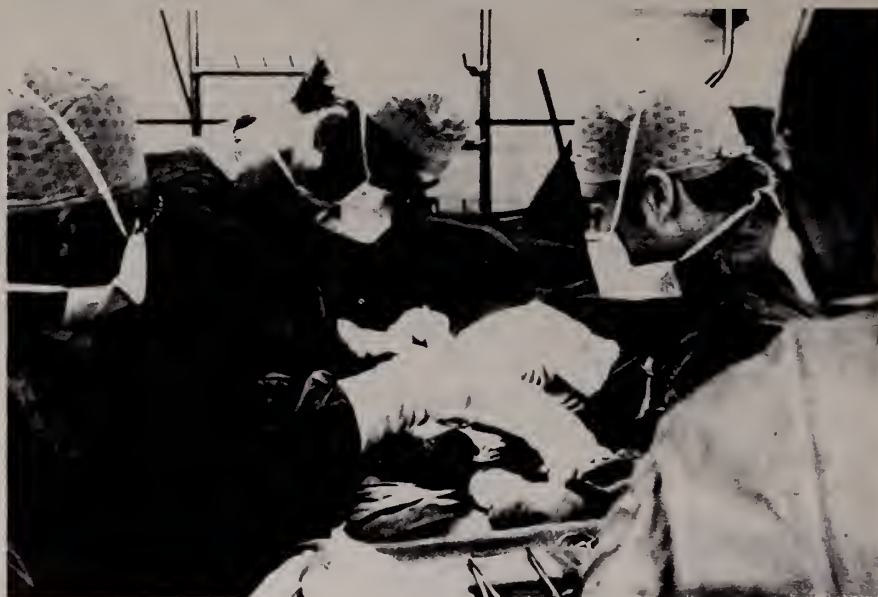
Also in this issue is an article on the crucifixion and death of Jesus Christ, along with a related commentary by one of your colleagues, submitted in an exciting manner of timing. May the special blessings of the Easter season -- Peace and Hope -- be yours.

Sincerely,



Patsy Silver
Managing Editor

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Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication: Known allergy to cephalosporins

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in

moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.

- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

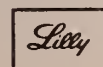
Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions [including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme (rarely, Stevens-Johnson syndrome) and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever]: 1.5%, usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
 - As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
 - Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonemia, dizziness, and somnolence have been reported.
 - Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.
- Abnormalities in laboratory results of uncertain etiology**
- Slight elevations in hepatic enzymes.
 - Transient fluctuations in leukocyte count (especially in infants and children).
 - Abnormal urinalysis, elevations in BUN or serum creatinine.
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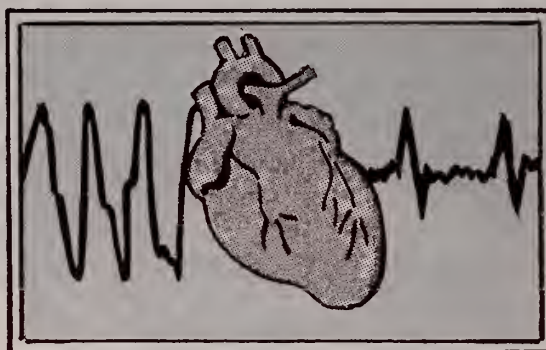
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DATELINE

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any of the department's facilities, including district and county offices. The intent of the policy is to set an example for other state agencies, the private sector and general public, and to protect from passive smoke inhalation the 85% of health department employees who are non-smokers.

Jackson, MS - At its December meeting, the MS State Board of Health took action to enact a policy prohibiting smoking inside

Hollingsworth Memorial Clinical Research Award

Research Award, which provides support for a 12-month clinical research project in cardiovascular medicine or surgery. Applications may be obtained from the American Heart Association's Mississippi Affiliate, P.O. Box 16808, Jackson, MS 39236-6808. Deadline is May 1.

Jackson, MS - Physicians in private practice or academic medicine are eligible for the Jefferson F. Hollingsworth Memorial Clinical

Ole Miss Publishes Cocaine Research Bibliography

book form. Cocaine, An Annotated Bibliography cites more than 5,000 papers in over 1,000 technical journals. The two-volume book was six years in the making, and plans call for supplements every two or three years. Contact University Press of MS, 3815 Ridgewood Rd., Jackson, MS 39211.

University, MS - What is termed the "world's most comprehensive collection of cocaine research literature" is now available in

HIV Blood Test Counseling Guidelines for Physicians

increasingly faced with patients who ask about, or who should be interested in, HIV antibody testing. Order this brief, but comprehensive review from the AMA, 535 North Dearborn St., Chicago, IL 60610. The booklet costs \$2.00 per copy, and minimum order is 5 copies.

Chicago, IL - The AMA has published a brochure, "HIV Blood Test Counseling: Physician Guidelines" for doctors who are

Medical Meetings On Future Calendar

Chicago...The First International Congress on Peer Review in Biomedical Publications, sponsored by the AMA and JAMA, is set for May 10-12, in Chicago..."Redesigning Rural Health" is the theme of the 12th National Conference on Rural Health, April 30-May 3 in Reno, Nevada.

Chicago, IL - "Preparing for Leadership is theme of the AMA's National Congress on Adolescent Health, May 19-21 in



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ORIGINAL PAPERS

Hematogenous Osteomyelitis and Septic Arthritis in Children: A Ten Year Review

WILLIAM B. GEISSLER, M.D.

JOHN M. PURVIS, M.D.

Jackson, Mississippi

HEMATOGENOUS OSTEOMYELITIS and septic arthritis in children are problems many primary care physicians may encounter. Basic management of these problems includes extremity immobilization, adequate surgical drainage of purulent material in selected patients and long term antibiotic coverage.

Controversy continues to exist concerning the required duration of high dose parenteral antibiotics and the indications for surgical treatment. Traditional recommendations for therapy have included a minimum of three weeks of intravenous antibiotics.¹ However, several physicians recently have documented the efficacy of a short course of intravenous antibiotics followed by a longer, monitored course of oral antibiotics.^{2, 3} The advantages of such protocol include decreased patient discomfort, reduced risk of thrombophlebitis and nosocomial infections and reduced cost of treatment. The disadvantages include the requirements of patient compliance and a laboratory facility capable of determining antibiotic bactericidal levels and the lack of appropriate oral antibiotics in some cases.

There are also differences of opinion regarding the indications for surgical treatment of hematog-

enous osteomyelitis and septic arthritis. Some physicians limit surgical intervention to cases with abscess formation or to joints which cannot be easily aspirated on a repetitive basis.⁴ Other physicians routinely recommend surgical drainage of all septic joints and all but the mildest cases of osteomyelitis.⁵

The purpose of this paper is to review the management of children with hematogenous osteomyelitis and/or septic arthritis. We have compared a recently instituted protocol of short term intravenous antibiotics and selective surgical drainage followed by the prolonged use of closely monitored oral antibiotics with other methods of treatment previously used.

Materials and Methods

Between 1977 and 1988, a total of 75 children were treated for hematogenous osteomyelitis and septic arthritis at Mississippi Baptist Medical center by eight orthopaedic surgeons. Forty-nine patients were treated for osteomyelitis; 26 were treated for septic arthritis. There were 47 boys and 28 girls with an average age of six years and seven months (range one month to fifteen years). (See Table 1). Seventy-one patients were available for review with followup which ranged from six to 48 months. Cases of osteomyelitis or septic arthritis secondary to open wounds or surgical intervention were excluded.

Dr. Geissler is a resident physician in orthopaedics at the University of Mississippi Medical Center. Dr. John Purvis is in the private practice of pediatric orthopaedics in Jackson, Mississippi.

Routinely after full clinical examination, a complete blood count, erythrocyte sedimentation rate (ESR), bone or joint aspiration, and complete radiographic examination were performed. Intravenous antibiotics were routinely started immediately after cultures of blood, joint, and/or bone were obtained. Twenty-one out of the 47 patients with osteomyelitis underwent surgical incision and debridement. Twenty-one of the 24 patients with septic arthritis had arthrotomy with irrigation and drainage and two were treated with joint aspiration only.

Since 1984, fifteen of these 75 patients have been managed according to a new protocol described by Nelson.³ Each of these patients received intravenous antibiotics for only three to ten days until definite improvement in clinical response and sedimentation rates were noted. Surgical drainage of all the infected joints, and three of the seven infected bones

were performed. The causative organism was identified and retained. Oral antibiotic therapy was instituted during hospitalization and serum bactericidal titers were measured using the patient's own serum against the isolated organism. The patient was discharged when compliance and tolerance of dosages necessary to maintain a peak bactericidal titer of 1:8 was achieved. Monitored oral antibiotic therapy was then continued for approximately four weeks.

Results

All patients initially had acute bone or joint pain. The mean duration of symptoms prior to diagnosis was eight days in those with osteomyelitis and three days in those with septic arthritis. For 47 patients with osteomyelitis, a history of previous trauma was obtained in 16 and a history of prior illness was given in eight. For the 26 patients with septic arthritis, a history of injury was given in ten and a history of recent illness in nine. The most common physical finding in both groups was fever which occurred in 68 of the 75 patients. Figure 1 demonstrates the frequency of involvement of specific bones and joints. The ESR was elevated in 69 patients and the white blood cell count (WBC) was elevated in 46.

The causative organism was identified in 45 of the 75 patients. The results of the bacteriological cultures are shown in Table 2. *Staphylococcus aureus* infection occurred most commonly and at an average age of eight years with a range between two and fifteen. The second most frequent infecting organism was *Hemophilus influenza* type B which occurred at an average age of 15 months with a range of five to 23 months.

Seventy-one of 75 patients were available for review. In all but four of these the results were satisfactory with no evidence of recurrence of infection or significant physical impairment. Three of the 47 patients treated for osteomyelitis developed a recurrent infection. The causative organism was *Staphylococcus aureus* in two and was undetermined in the third. All three patients had been treated by surgical debridement and long term parenteral antibiotics. Of the 24 patients treated for septic arthritis one developed a recurrent infection. In each case there had been a delay in initial aggressive treatment because the child had been receiving oral antibiotics which proved inadequate.

Discussion

Hematogenous osteomyelitis and septic arthritis are uncommon problems encountered by the pri-

TABLE 1

47 BOYS AND 28 GIRLS WERE TREATED FOR HEMATOGENOUS OSTEOMYELITIS AND SEPTIC ARTHRITIS. THE AVERAGE AGE WAS 6 YEARS AND 7 MONTHS, WITH A RANGE OF 1 MONTH TO 15 YEARS.

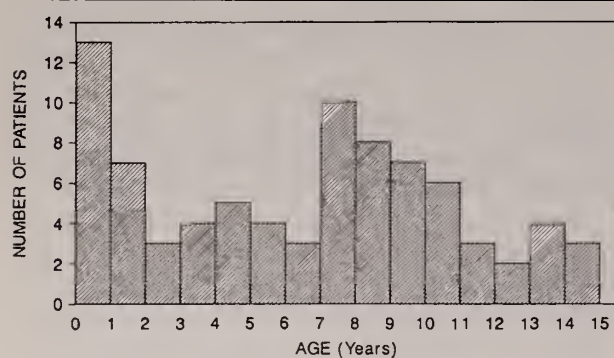


TABLE 2

BY FAR THE MOST COMMON ORGANISM INVOLVED WAS *STAPHYLOCOCCUS AUREUS*, OCCURRING IN 35 OF 45 POSITIVE CULTURES AND IN AN OLDER AGE GROUP WITH AN AVERAGE AGE OF 8 YEARS.

Organism	Osteomyelitis	Septic Arthritis	Total
<i>Staphylococcus Aureus</i>	27	8	35
<i>Staphylococcus Epidermis</i>	0	1	1
<i>Streptococcus Gp A</i>	1	0	1
<i>Streptococcus Gp B</i>	1	0	1
<i>Streptococcus Pneumococcus</i>	0	1	1
<i>Hemophilus Influenza</i> Type B	2	4	6
TOTAL	31	14	45

mary care physician and orthopaedic surgeon. Osteomyelitis has a predilection for the metaphysis of long bones in growing children. This is thought to be related to sludging of blood flow in the venous lakes adjacent to the physis and to absence of reticuloendothelial cells in the area.⁶ In some joints the metaphysis lies within the capsule and coexistence of a septic arthritis and osteomyelitis may occur from frequent sites of infection such as ears and the respiratory system. Localized hematoma from recent injury is an ideal culture medium and may set the stage for subsequent infection.

Staphylococcus aureus coagulase positive is the organism that has been found to cause the vast majority of acute hematogenous osteomyelitis and septic arthritis, being responsible for over 90% of cases in normal children.⁷ For the neonate, group B *Streptococcus* and gram negative infections are common and in the child less than five years old, *Hemophilus influenza* Type B is common. Our review agrees that *Staphylococcus aureus* is by far the most frequently found causative organism in these infections. There were no cases of methicillin resistant *Staphylococcus aureus* in our community hospital.

Children with acute bone pain and signs of sepsis should be considered to have acute hematogenous osteomyelitis until proven otherwise. According to Peltula,⁸ the diagnosis of acute osteomyelitis could be established if a patient fulfilled two of the following: (1) bone aspiration yielding pus, (2) positive bone or stool culture, (3) classical signs of osteomyelitis, (4) typical radiographic changes of osteomyelitis.

Once a clinical diagnosis of acute hematogenous osteomyelitis or septic arthritis is made, a bacterial diagnosis should be attempted by culturing the involved bone or joint. Bone aspiration is not only helpful in determining the bacteriology, but also will determine if any abscess is present which will need to be surgically drained. The involved bone should be aspirated at the point of maximum swelling and tenderness. The needle should be inserted to the outer cortex and aspirated. If an abscess is not encountered, the needle can then be advanced into the bone and aspirated. A patient with a possible septic hip warrants aspiration under fluoroscopic control to confirm proper needle placement. Sequestered abscesses require surgical drainage while an area of simple inflammation may respond to antibiotics alone. Our indications for surgical treatment include: (1) sub-periosteal abscess; (2) lytic lesion on plain radiographs; (3) failure to clinically respond to parenteral antibiotics; or (4) an acutely septic child. It usually is not necessary to leave a

ARTHRITIS

OSTEOMYELITIS

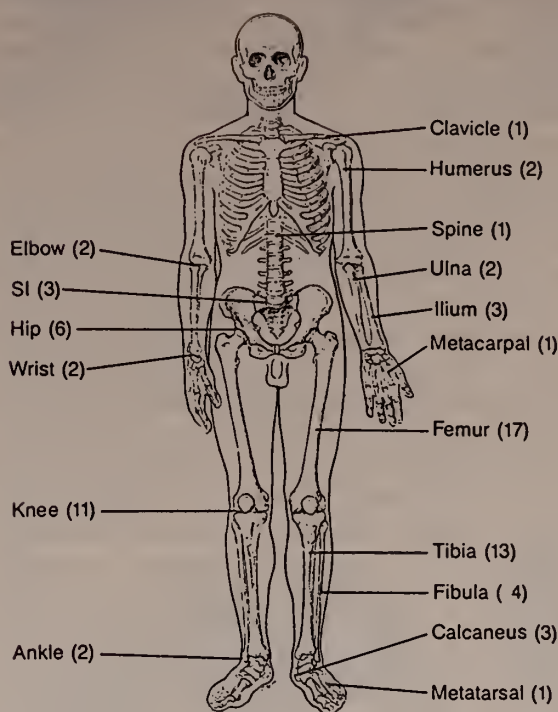


Figure 1

wound open which can be effectively closed over drains.

Combined intravenous and oral antibiotic therapy has become the standard of therapy for acute hematogenous osteomyelitis and septic arthritis. The proven protocol of three weeks of parenteral antibiotics followed by three weeks of oral antibiotics is currently being revised as more physicians favor a shorter period of intravenous antibiotics followed by a prolonged course of oral medications. Nafcillin or Oxacillin at a dosage of 150 mgs/kg/day administered in divided doses is commonly used as the initial parenteral medication.⁹

If the patient responds quickly to intravenous antibiotics, one may consider switching the child to oral therapy. This requires the complete cooperation of the family and child. One must be certain that the child is able to swallow and retain the oral medications. The bacterium should be retained so the laboratory can test it against the antibiotic being used. Peak serum levels of the oral antibiotics are determined by obtaining a blood sample one hour after administration of the drug. The bactericidal level of the drug in the blood should be 1:8 or greater against the retained bacterium. Generally, dicloxacillin at a dosage of 50 mgs/kg/24 hours is administered as the oral drug.

In our series, 15 patients with bone or joint infections were managed successfully by a new protocol involving selective surgical drainage, short term intravenous antibiotics and prolonged, closely monitored oral therapy. Serum bactericidal levels must be determined to confidently use this protocol of treatment and strict compliance with dosage must be achieved. There were no recurrent infections or physical impairment noted in this group followed over a limited interval.

Our ten year review of hematogenous osteomyelitis and septic arthritis in a community hospital confirms that *Staphylococcus aureus* remains the most common infecting organism and that early diagnosis coupled with appropriate decompression and high dose antibiotics gives satisfactory results. However, if diagnosis is delayed, or antibiotic coverage or surgical drainage is inadequate, then significant sequelae may result. Our initial successful experience with the use of short term high dose parenteral antibiotics followed by monitored oral therapy confirms those results reported by others.³ However, such success is dependent on close adherence to established protocol and modifications are not encouraged. ★★★

Dr. Purvis: 421 South Stadium Circle (39216)

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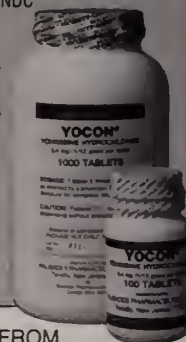
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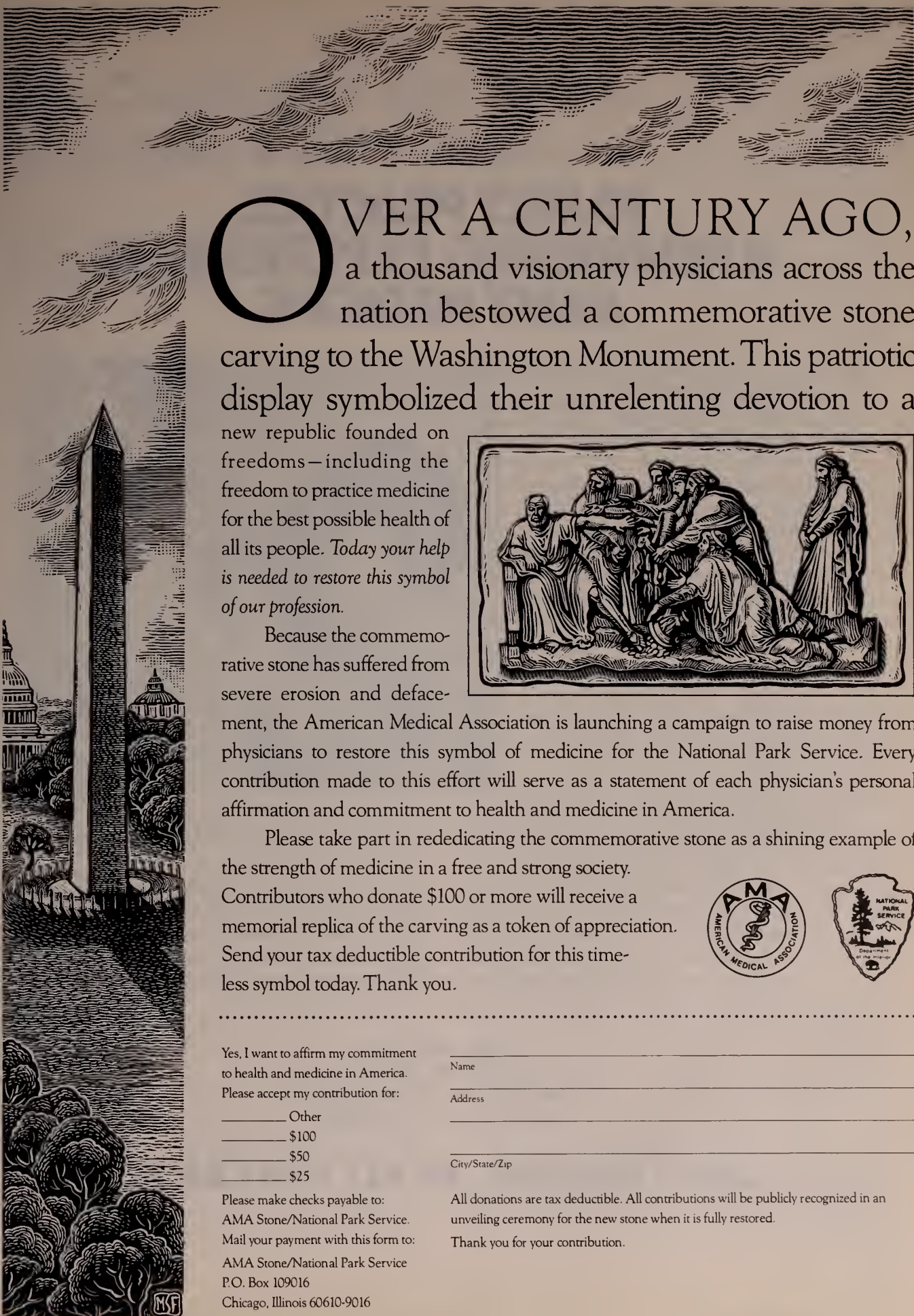
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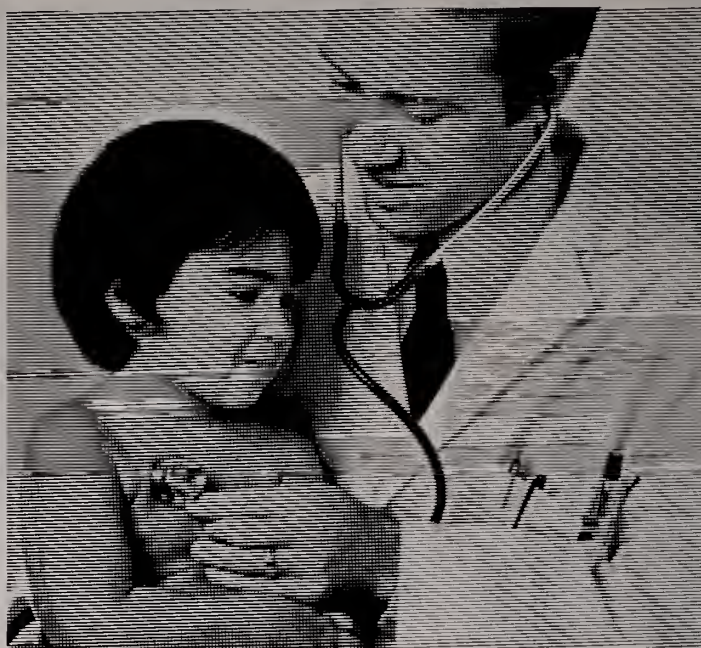
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The Crucifixion and Death Of a Man Called Jesus

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IN THE MARCH 21, 1986 issue of the *Journal of the American Medical Association*, there was an article which detailed the physical aspects of the death of Jesus Christ.¹ In general, it was an excellent article with good references and detailed sketches designed to give the reader a better understanding of a now extinct form of execution — crucifixion.

However, the conclusions drawn by the authors seemed to lack a degree of specificity which I feel should be addressed. Given the details of the Gospel accounts, we can hypothesize very specific probable cause of the death of Jesus and in turn compile reasonably convincing evidence to validate that probable cause. The more specific we can be concerning the cause of the death and the more logical we can be in compiling our proof of that cause, then the more certain we can be as to the reality of that death. So, within the forum of medical literature, I would like to sound my ideas regarding the crucifixion of Jesus and see if you do not agree that, given the facts, my conclusions regarding the cause of the death of Jesus are logical and even likely.

Why are we even addressing this issue at all? One of the more significant questions raised in regard to the death of Jesus is just that. . . . Was it *the death*? That question seems to be fueled not only by the “natural” reluctance to accept the account of the resurrection without some “natural” explanation (such as Jesus was not really dead), but also by a nagging doubt which is raised when we find that Pilate himself marveled that Jesus was so soon dead (Mark 15:43-45).

No matter what one's faith might be, I think it would be safe to say that no man's death has been more questioned, more studied, and more revered than has the death of Jesus Christ. Through the

The following article is excerpted and re-written from an unpublished book by the author, entitled Jesus Christ: Lord of the Covenant.

The article contends that Jesus did not die of exhaustion and asphyxiation, which was the intent of crucifixion; but instead died of a rupture of the free wall of the myocardium, which resulted in cardiac tamponade. Pathogenesis of this process is discussed, and postmortem evidence is cited as confirmation.

scrutinizing eyes of history, the resurrection has shaped and continues to shape the destiny of mankind as no other singular event in all of recorded history.

If, however, this man Jesus did not truly die, then a cruel hoax has been perpetrated on mankind — for without the death of Jesus, the resurrection has no meaning. Therefore, the death of Jesus must be validated, and who is more qualified to evaluate and judge the data relating to the death of Jesus than the modern physician? It is for that reason we are obligated to carefully re-evaluate the events surrounding the death of Jesus.

Any study of the death of Christ has to begin with the trial because it was inhumane, illegal, and exhausting. It lasted all night as Jesus was dragged from one “judge” to another. He was mocked, ridiculed, slapped, spit upon and falsely accused. When he was finally “convicted,” he was beaten unmercifully with a Roman flagrum.

In the *JAMA* reference article, Edwards et al, comment, “The severe scourging, with its intense pain and appreciable blood loss, most probably left Jesus in a preshock state. Moreover, hematomatosis [bloody sweat in Gethsemane] had rendered his skin

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particularly tender. The physical and mental abuse meted out by the Jews and the Romans, as well as the lack of food, water and sleep, also contributed to his generally weakened state. Therefore, even before the actual crucifixion, Jesus's physical condition was at least serious and possibly critical."²

We sometimes overlook or underestimate the severity of the flogging Jesus received. The reason might be in part because we tend to think of the whip as a platted leather instrument capable of raising painful blisters and even superficial bleeding if applied repeatedly and with enough force. The Roman flagrum was something entirely different, however. It was, indeed, composed of leather strips; but tied to the end of each of these were pieces of metal, glass, and bone. This whip was designed to cut away at the flesh and render the subject nearly moribund.

C. Truman Davis, M.D., describes the flogging in very graphic terms . . .

Preparations for the scourging were carried out. The prisoner was stripped of his clothing and his hands tied to a post above his head. It is doubtful whether the Romans made any attempt to follow the Jewish law in the matter of the scourging. The Jews had an ancient law prohibiting more than forty lashes. The Pharisees, always making sure that the law was strictly kept, insisted that only thirty-nine lashes be given. In the case of a miscount, they were sure of remaining in the law. The Roman legionnaire stepped forward with the flagrum, or flagellus, in his hand. This was a short whip consisting of several heavy, leather thongs with two small balls of lead attached near the ends of each. The heavy whip was brought down with full force again and again across Jesus's shoulders, back and legs. At first the heavy thongs cut through the skin only. Then, as the blows continued, they cut deeper into the subcutaneous tissues producing first an oozing of blood from the capillaries and veins of the skin, and finally spurting arterial bleeding from vessels in the underlying muscles. The small balls of lead first produced large deep bruises which were broken open by subsequent blows. Finally, the skin of the back was hanging in long ribbons and the entire area was an unrecognizable mass of torn, bleeding tissue. When it was determined by the Centurion in charge that the prisoner was near death, the beating was finally stopped.³

This scourging is considered by some to be the reason Jesus died sooner than was expected; but if we are honest, that cannot be true. The scourging was a routine preamble to the crucifixion.^{4, 5} Pilate knew this. He must have seen many crucifixions. He was still surprised when he learned of Jesus's early death. There was another reason for Jesus's rapid death, which we shall learn — but first we must understand something of the mechanics of crucifixion.

Today, there is no comparable form of execution, but in Jesus's day, it was common. The Romans executed thousands of criminals and malcontents using this form of torture. It was considered so cruel that Roman citizens were almost never executed in this manner.^{6, 7}

The specific details of the execution process enable us to understand what happened to Jesus and to draw dependable conclusions as to probable cause of death.

Mechanics of Crucifixion

Following the near death scourging, the victim was forced to bear his cross to the place of execution. There is good evidence that this usually consisted only of the crosspiece or patibulum which was strapped to the victim's back and outstretched arms.⁸ (We shall look more at this later.)

On arrival at the site of execution, the victim was placed on the upright; and the slow process of tortured death was begun. Just how slow and agonizing this process was depended on many details which were controlled by the executioner.

The first option available to the executioner was whether or not to nail the victim to the cross. The Romans seemed to favor nailing their victims to the cross,^{9, 10} and the Bible is explicit in this detail of Jesus's crucifixion (John 20:24-29). However, we need to understand that death would ensue even if nails were not used and the victims were tied to the cross. It would simply take longer for death to occur if the victims were tied to the cross.¹¹

The next consideration in the execution process was the positioning of the spikes on the cross and the manner in which the executioners secured the victim to the cross. Three spikes were necessary to secure the victim — one in each of the upper extremities and one single spike through both lower extremities.

The average layman understands that the spikes securing Jesus's upper extremities to the cross were nailed through his hands. This is understandable since most English versions seem to imply such (John 20:24-29). However, this interpretation is problematic in light of studies done by Pierre Barbet, M.D. Dr. Barbet secured cadaver wrists to a wooden beam using spikes through the palms and found that the weight of a body when suspended from the cross would simply tear the spikes through the hands. If, however, the spikes were placed in the wrists, a body could be suspended successfully.¹²

This seeming discrepancy can easily be resolved by a brief Greek word study. The Greek word from

which our English word *hand* is translated (John 20:24-29) is *cheir*. In the Greek language this word may include the hand *and* the wrist.¹³ This is important in our study here because it confirms the reliability of the Gospel accounts in providing details on which we can base our conclusions.

With both wrists thus fixed to the crosspiece or patibulum, and the victim suspended in this manner, his lungs would remain passively hyperinflated. In order to exhale so that new air could be inhaled, the victim of crucifixion had to actively lift himself on the cross¹⁴ so that he could force air out of his lungs.

In my own studies of volunteers suspended from a cross — using leather wrist straps and metal hooks instead of nails — I have found the positioning of the arms on the uprights to be very important. The more outstretched the arms on the crosspiece the more painful to hang suspended. I rather suspect that the Romans well knew the results of positioning the hands and used this knowledge to achieve their desired results.

But, if the positioning of the hands is important, then I would have to say that my studies suggest the positioning of the feet is *critical*. There are two factors here that must be considered. First is the point of attachment of the feet to the vertical portion of the cross. If the feet are secured toward the lower reaches of the suspended body, then obviously the victim would not be able to lift himself much in his effort to exhale. Consequently, he would expend maximum effort and inhale minimum fresh air. If, however, the feet were fixed further upward on the vertical piece, then the victim would be able to push himself up considerably more. This would enable him to exhale more completely and to take in more fresh air. Therefore, all other things being equal, he would live longer on the cross.

There was yet a second consideration, though, in this matter of securing the feet. If the feet were turned sideways and the spike driven through one heel and into the other as it fixed the feet to the vertical piece, then the victim could lock his knees in a fully extended position whenever he pushed up to breathe. He would then be able to maintain this position for lengthy periods of time and might even die of thirst or starvation. This would explain how some crucifixion victims have been known to live for days. On the other hand, if the feet were plantar flexed and one placed flat against the upright with the sole of the other foot on top and both secured by a single through and through spike, then the victim would be unable to fully extend his knees. Since he would not be able to lock his knees, the

energy expenditure for respiration would increase enormously because each respiratory cycle would require the victim to lift his entire weight and then let it down as gently as he could in order to avoid the shearing pain of the spikes in the wrists.

Understanding these factors would make possible the Romans' "tailoring" of the crucifixion agony to fit the victim. We know that Jesus had to be dead by sundown because he was crucified on the day of preparation (John 19:31) with the Sabbath/Pass-over beginning at 6:00 p.m. We also know that Jesus was crucified at 9:00 a.m. Since Jewish law would not allow a victim to remain on the cross past sundown, we can presume that the Romans would have designed Jesus's crucifixion to be "short-lived." This would mean, in all likelihood, that Jesus's feet were plantar flexed with the soles nailed to the uprights. Even so, we have pointed out that Pilate was still surprised at his early death. This would suggest other causes for the early death. Therefore, we need to look closely at some of the mechanics of crucifixion.

As we have seen, each respiratory cycle required that Jesus lift himself on the cross, exhale and gently let himself down as he inhaled. His back was laid bare from the scourging so that each cycle of breathing necessitated that he rub his back against the upright and agonize as the raw flesh was further macerated. Each time he took a breath, his leg muscles quivered as his feet pushed against the spike. Each time he sought relief by resting his legs, the spikes in his wrists would spit fire into the stretched and lacerated median nerve. There was no relief.

The agony helps us appreciate — but the physiology of those terminal hours in the life of Jesus helps us understand. It is this understanding which allows us to draw conclusions as to the cause of the death of Jesus. That is here our quest.

In terms of those physiologic processes of crucifixion, what actually happens during the terminal hours on a cross? In rather general terms, I would propose the outline of those events to look something like the following:

- I. Respiratory efficiency is decreased because of the following reasons:
 - A. Relative hyperinflation of the lungs produces an increase in residual lung volume.
 - B. Lifting the body on the cross during each respiratory cycle produces an enormous increase in energy expenditure.
- II. Respiratory inefficiency is usually accompanied by an increase in respiratory rate as a means of compensation. This is not possible

during crucifixion due to the pain and effort of breathing. Therefore, respiratory acidosis develops.

- III. With diminished oxygen exchange, hypoxemia develops.
- IV. Hypoxemia leads to anaerobic metabolism. During crucifixion there is continued and significant muscle activity associated with respiration. This necessitates a significant demand for energy through the Krebs cycle; and since this occurs in an oxygen-depleted state, it results in the production of excess lactic acid and metabolic acidosis.
- V. Hypoxemia, hypovolemia (secondary to blood loss and sweating), and the increased work load previously described, all contribute to produce a compensatory tachycardia.
- VI. As the acidosis (combined respiratory and metabolic) continues and the pH drops, muscle cramps worsen; and it becomes more difficult for the victim to lift himself to breathe.
- VII. In the final stages, blood is shunted from skeletal muscle to vital organs in an effort to salvage the body.
- VIII. At this point, skeletal muscle becomes relatively anoxic; therefore respirations are further inhibited; and a vicious cycle ensues leading to a quiet death by exhaustion and asphyxiation because there is simply no energy left to resist.

Although I have never seen a crucifixion, I have (as most of you have also) seen many patients die in the same terminal circumstances described above. Severe COPD and CHF/Pulmonary Edema patients struggling for their last breath are vividly retained in most of our memories. Although it is an agonizing and frightful way to go (if the patient is conscious), it is, nonetheless, a quiet death. These patients do not scream and holler because they simply do not have the strength and breath to do so. Often, they do not even so much as whisper because all of their efforts are directed at saving that precious breath of air.

As we have seen, the usual means of death on the cross was by exhaustion and asphyxiation. That was its design. Jesus did not die that way. We can be sure of it. The Bible provides the details necessary for us to make this conclusion.

In Luke 23:46 we read: "And when Jesus had cried with a loud voice, he said, Father, into thy hands I commend my spirit, and, having said this, he gave up the spirit."

Matthew 27:50 and Mark 15:37 repeat the part

about Jesus's crying with a *loud* voice and then suddenly giving up the spirit. If Jesus had died of exhaustion and asphyxiation, then he would not have had the air in his lungs to have cried out with a loud voice saying, "Father into thy hands I commend my spirit . . ." and then suddenly die.

Instead, the scriptures indicate that something happened suddenly causing Jesus to cry out in pain and then suddenly die. That is not the picture of death by exhaustion and asphyxiation. Now, we must honestly ask ourselves, could Jesus have faked it at this point? Absolutely not! By its very design the crucifixion would have prevented this.

If Jesus had intentionally tried to pretend death, then he would have had to breathe without anyone in the crowd noticing it, an impossible feat considering that each breath required the victim to lift himself on the cross so he could exhale and then inhale fresh air. Everyone would have seen this — in particular, the soldiers who were trained executioners.

If Jesus had simply swooned, as some insist, then he would have died anyway because he would not have been able to lift himself to breathe. That was the design of the crucifixion process. That was the purpose of breaking the legs of the victims who were not already dead. Once their legs were broken, they could not lift themselves on the cross to breathe. Then death would ensue quickly.

The final proof, however, of Jesus's death was the "coup de grace" of the sword in his side. This was the soldier's surety of the victim's death, a trained maneuver to lay to rest the question of a live victim. We will look at this maneuver more closely in a moment.

Probable Cause of Death

What then can explain the loud cry and sudden death of Jesus as he hung on the cross? Once all the evidence is considered, I think you will agree that a true rupture of the myocardium is the most likely probable cause. I think this process can be documented with a high degree of probability.

First, let's understand that I am referring to a true or external rupture of the myocardium and not a papillary or septal rupture. In such a situation there would rapidly develop a terminal sequence with cardiac tamponade and rapid fall in arterial pressure. Under the circumstances of the crucifixion, this would lead to *certain* and *rapid* death.

Even though there was no formal postmortem examination, I think we can substantiate this mode of death because the Bible again provides us the critical details.

John 19:34 says, "But one of the soldiers, with a spear, pierced his side and immediately came there out blood and water." The significance of this comment is incalculable from a medical point of view. That makes it all the more interesting when we realize that Dr. Luke doesn't even mention it. That's because he had no way of knowing the significance. Had Dr. Luke been the one to relate these details, no doubt some antagonist would have insisted that the evidence had been planted.

The truth is, John didn't even know the significance of what he wrote. He simply knew something unusual was happening and wanted to be sure it was recorded for posterity.

John 19:35 says, "And he that saw it bore witness, and his witness is true; and he knoweth that he saith true, that he might believe."

You can almost sense John's efforts to convince the reader that what he was writing was the truth. Ordinarily when a dead man is cut, no blood flows. John and the rest of us know that. That is probably why he insisted that his witness of the event was true. But, it is also why this bit of evidence is doubly important. Since no one present at the crucifixion knew the significance of the blood and water and, indeed, it appeared to be even contrary to the expected norm; we can be assured that this account was not fabricated, but was simply an honest rendering of the crucifixion events.

If indeed a rupture of the free wall of the left ventricular myocardium occurred (as I believe it did), then there would certainly be cause for sudden death with rapid development of cardiac tamponade. Ordinarily, there is approximately 30 cc of clear fluid in the pericardial cavity; but due to the stress of the terminal events with congestive heart failure and decreased venous return to the heart due to hypovolemia and hyperinflation of the lungs, there could have been 100 cc or more of pericardial fluid present.¹⁵ Rupture of the free wall of the ventricle would have added another 200 or 300 cc of blood before tamponade would have effectively produced cardiac standstill. This blood would probably be noncoagulating,^{16, 17} and with the demise of the victim there would be some settling of the cellular components to the bottom of the pericardial cavity. (There certainly could be some clotting, also,¹⁸ which would likewise contribute to the separation of red blood cells and "clear fluid.")

At this point, the Roman soldiers came to check on the status of the three crucifixion victims and found that Jesus was already dead. Reacting in true military form, the "coup de grace" thrust of the sword was aimed at the heart. As soon as it pierced

the pericardium, the pressurized contents gushed forth. The blood which was on the bottom came first, followed by the clear "water" on the top. That is exactly the way the Bible says it happened.

Suppose, however, for the sake of argument, that my proposed scenario is not correct. What then might we have expected from the sword piercing?

If Jesus had been alive at the time, the blood would have flowed as soon as the sword pierced the myocardium and would have stopped as soon as the heart stopped. There would have been no water to flow.

If Jesus had been dead, but the heart had not ruptured, then not much at all would have happened with the sword piercing. Perhaps a little blood would have flowed, but not much, because the contents of the heart would not have been under pressure since the heart would have been in asystole. Therefore, when the sword was removed, the wound would close and simply ooze a little blood. Again, there would have been no flow of water.

The Bible gives us solid evidence of the death of Jesus and of the cause of that death. What has concerned me in the past has been the lack of an acceptable and rational medical reason for Jesus's heart to rupture. Most references dealing with this question simply say that Jesus died of a broken heart and mention John's account of the blood and water as proof (without even explaining that). Some have gone one step further and have said that the emotional stress Jesus was under on the cross caused his heart to rupture. That could be true, I suppose, but there is no evidence in current medical literature that I can find to suggest that emotional stress alone can cause the normal heart to rupture.

If the heart did rupture, and we are to maintain this was the probable cause of death, then we need some evidence suggesting pathogenesis.

To do this, we need to retrace the events prior to the crucifixion because there we find important clues. We have already shown that Jesus was worn down by a night-long fiasco of trials. Then he was beaten unmercifully with the Roman flagrum. Next, we are told in John 19:16-17 that they put the cross on his back and led him away to Golgotha where they crucified him.

Dr. Pierre Barbet states that the crosspiece weighed slightly over 100 pounds and that it was strapped to Jesus's shoulders and outstretched arms.¹⁹ This weight seems reasonable in view of my personal studies. The cross which I use for demonstration and study purposes is made of kiln-dried pine, 5.5 inches square. The crosspiece weighs approximately 50 pounds. Assuming that Jesus's cross

was made of green wood of a more dense nature such as oak, it would be easy to account for a cross-piece weight of approximately 75-100 pounds. If the wood used were somewhat larger than 5.5 inches square, obviously the weight could be considerably more than 100 pounds. Now, with this weight strapped to his back, Jesus began his trek to Golgotha. We have already established the exhausted and debilitated state that Jesus was in following the scourging. This was enough to overburden even the strongest of men.

Somewhere along the route to Golgotha, Simon of Cyrene was conscripted to carry the cross of Jesus. This is attested to in Matthew 27:32, Mark 15:21, and Luke 23:26. There must have been a reason for this conscription, and it could not have been sympathy, for not once do we have a suggestion that the Jews or the Romans were sympathetic to Jesus. In fact, it was their anger and hatred that literally dominated the scene. There had to be another reason.

The day of the crucifixion was very busy for the Jews. It was the preparation for the Passover. The Jews did not want to leave their bodies on the cross after sundown, for that was against Jewish laws (John 19:31, Deuteronomy 21:23 and Joshua 8:29, 10:26-27). For this reason, the crucifixion needed to be hastened, and this half-dead Jesus was stumbling along at a snail's pace. He was falling as he wearily forced each step of the way. With his outstretched hands tied to the crosspiece, he was taking a severe battering with each fall, and it was doubtful that he could even make it to Golgotha. For that reason, Simon of Cyrene was conscripted to carry Jesus's cross.

Often it is the little details that give us the greatest insight, and they are so often overlooked. The above paragraph which explains why Simon of Cyrene was conscripted to carry Jesus's cross also explains the pathogenesis of Jesus's ruptured heart.

As we explained, Jesus's outstretched arms were tied to the crosspiece. When he fell, he had no way to break the fall, so he fell straight forward into the street. With the weight of the crosspiece on his back, this was sufficient to inflict significant injury to the chest wall, which would have borne the brunt of the force. The resultant injury would have been similar to blunt chest trauma sustained in an automobile accident when the chest collides with the steering wheel of a car.

The following quote from *Friedberg's Diseases of the Heart* helps us to understand this type of injury better.

A frequent cause of nonpenetrating cardiac injury is the well publicized steering-wheel accident. The driver's chest is pinned against the steering wheel when the forward momentum of the car is suddenly arrested. Severe cardiac injury or rupture of the heart often follows crushing chest accidents when an auto, train or other vehicle runs over the prostrate body. . . . Direct blows to the anterior chest wall by a baseball, golf or tennis ball travelling at high speed, by heavy falling or swinging objects which strike at great velocity, fist blows and kicks by a horse or other powerful animal and compression of the chest between two moving objects are among the causes of nonpenetrating cardiac trauma. . . .

Serious contusions and even rupture of the heart often occurs without significant visible external injury of the chest wall and without fracture of the chest wall and without fracture of the ribs. In fact, in a series of 250 nonpenetrating chest injuries by Arenberg, the greater cardiac damage occurred among the cases without rib fracture.²⁰

That is particularly important since we know that Jesus had no broken bones (John 19:36).

There seems to be no reasonable doubt that the fall could cause significant myocardial injury and even rupture. It also seems to be reasonably certain that should there have been such an injury which predisposed to myocardial rupture, that the tremendous work load of the crucifixion process would have increased the likelihood of such a catastrophic event taking place. The remaining question seems to be, would it have occurred so soon? So, the question of Pilate (Mark 15:43-45) as to why Jesus was so soon dead demonstrates the reliability of the Bible, not only as an important source of facts, but also an important source of probing questions which lead us to the truth.

In an article by Becker and van Mantgen appearing in the *European Journal of Cardiology*, a study is made of 50 episodes of death by cardiac tamponade.²¹ Three types of rupture are defined in this study. Type I is characterized by an abrupt slit-like tear which correlates clinically with an infarct usually of less than 24 hours. Type II shows an erosion of the infarcted myocardium, indicative of a slowly progressing tear. This type correlated with a somewhat longer time interval between onset of symptoms and tamponade. Type III is characterized by early aneurysm formation which correlated clinically with older infarcts.

These three types of rupture are then correlated with the location of the myocardial injury — either anterior, lateral, or posterior. Twenty-nine ruptures occurred anteriorly which the authors point out is consistent with the incidence of anterior infarcts in the general population. What is interesting to me is

that a rupture occurring in this anterior group was very likely (72%) to be a Type I, which would result in sudden rupture and rapid demise.

It would seem likely that blunt trauma to the anterior chest wall, such as Jesus received, would result in anterior myocardial injury. Therefore, if a rupture were to occur in such a situation, we would expect it to occur within 24 hours — even if the subject were at rest. Certainly, it would seem reasonable that under stress such a rupture could be likely to occur within 6-7 hours. This time span would be likely considering the walk to Golgotha, crucifixion beginning at the third hour (Mark 15:25) and ending sometime after the ninth hour (Mark 15:33-37).

Summary

In summary, I would suggest that Jesus was unable to carry his cross because of his cruel treatment and scourging. He then fell with the 100 pound crosspiece on his back and was unable to break the fall because his outstretched hands were tied to the crosspiece. This resulted in blunt chest trauma and a contused heart. On the cross the workload of the heart was greatly increased due to multiple factors, but primarily the increased effort necessary to breathe. This resulted in a rupture of the free wall

of the heart, which caused Jesus to cry out in a loud voice and suddenly die. This cause of death is confirmed for us by the sword pierce to the side which resulted in the flow of blood and water. In effect, that was a brief and legitimate postmortem exam. JESUS WAS DEAD! THAT WAS FRIDAY! SUNDAY WAS COMING!

★★★

107 Eureka St. (38606)

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2. *Ibid.*
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4. *The Zondervan Pictorial Encyclopedia of the Bible*, Ed., Merrill, C. Tenney, 1976, Vol. 1, p. 1038.
5. Barbet, Pierre, *A Doctor at Calvary*, Translated by the Earl of Wicklow, Image Books, 1963, p. 45.
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10. Edwards, *et al.*

Journal MSMA policy prohibits publishing more than ten footnotes. For a complete bibliography, please contact the author.

Next Month in *Journal MSMA*:

- "Rural Health Program — The University of Mississippi."
- "Swofford's Stoma Sticker"
- "Alternative Approaches to the Management of Gravidas with Prolonged-Postterm-Postdate Pregnancies"
- "The Caduceus Revised"



THE PRESIDENT'S PAGE

DAVID R. STECKLER, M.D.

Mark Your Calendar Now!

EACH YEAR we have an opportunity to gather as a profession to hear, discuss and act on current medical issues and to establish the course of our professional association for the following year.

I am speaking of course of our MSMA Annual Session and Auxiliary Meeting which both promise to be significant events occurring May 31-June 4 at the Royal d'Iberville Hotel, Biloxi.

In addition to annual meetings of the MS Foundation for Medical Care and numerous specialty and alumni groups we will have an outstanding group of our colleagues presenting a scientific program on current medical topics.

We will also have an opportunity to hear national authorities on such subjects as "The Vermont Variations on Medical Practice Project," "The Physician Payment Review/Harvard Resource Based Relative Value Study," "M.D. Rights and Duties Under the Health Care Quality Improvement Act," "Current Legal Issues for the Hospital Medical Staff," and "Hospital Medical Ethics Committee." It is important that we be informed about these subjects and how they will impact in our state.

At this year's annual session our MSMA House of Delegates will be addressing many issues of concern to each of us. There has, for example, been a strategic plan developed over the past year which will be before the House of Delegates for discussion and action. There will also be many legislative and medical socioeconomic issues for the House of Delegates to consider and act upon.

Each member of the association has an opportunity to be elected a delegate by their component society and all members may speak before reference committees of the House of Delegates. If you have ideas about what the association is or should be doing this is the place to be.

I hope to see each of you at this year's annual meeting in Biloxi. We are planning some outstanding social events and thanks to the efforts of the MSMA Auxiliary there will be special children's events planned for those members who desire to make the meeting a family occasion. It will be a time for fun and serious consideration of matters important to the future of our profession. Mark your calendar now!

Drug Abuse and the Physician

In 1988, alcohol remained the most abused drug in this country. The diagnosis and treatment of chemical dependency is certainly an idea whose time has come, and was well addressed in the scientific articles presented in the December 1988 issue of the JOURNAL MSMA.

Anyone who questions the ability of the individual practicing physician to have an impact in this area should read those articles, as well as similar articles presented in the November 4, 1988 issue of JAMA. These studies present evidence that the physician can have a positive impact on the health of drug abusers in his or her practice with only a minimum amount of extra time and effort.

The attention given to drug abuse in the media, in government, and in the recently completed national elections reflects the growing concern of the American people about this tragic socioeconomic and health problem. The attention and input of individual physicians to this problem is equally well deserved.

In the context of organized medicine, physicians can provide strong leadership to help develop long-term solutions, but our best hope for immediate impact is the incorporation of detection and treatment (or referral) into everyday practice. We are obligated to our patients to develop the attitudes necessary to achieve this goal.

GEORGE E. ABRAHAM, II, M.D.
Associate Editor

**The Journal invites your suggestions and comments. Please address correspondence to:
The Editors, JOURNAL MSMA, P.O. Box 5229,
Jackson, MS 39296-5229.**

Medico-Legal Brief

No Property Right To Due Process Hearing

A physician who was denied hospital staff privileges did not have a property right to a due process hearing, a federal appellate court for Illinois ruled.

After the physician, a gynecologist and oncologist, was denied privileges, the hospital developed a procedure for reviewing staff applications, as required by state law. Various boards at the hospital reconsidered the physician's application, conducted hearings, and denied it again.

The physician's counsel was present at hearings that were conducted and repeatedly objected to statements criticizing the physician's ability. The physician filed a §1983 civil rights action against the hospital, claiming that the statements were hearsay and were improperly considered by the hospital. The trial court granted the hospital's motion to dismiss on the basis of a finding that the hospital was a private rather than a state institution under applicable law.

On appeal, the appellate court agreed with the trial court that the hospital was not a "state actor" for §1983 purposes simply because the state required hospitals to develop procedural guidelines for considering applicants for medical staff privileges. The court also found that the physician had not established that he had a property right to a due process hearing under state law. The court said that there was no constitutionally protected right to be able to practice medicine at the hospital of one's choice. In the absence of showing a protected life, liberty, or property interest in obtaining the hospital staff position, the court said, the physician had no due process entitlement. Nor did state law grant him the right to practice at the hospital of his choice. The court affirmed the lower court's judgment. — *Tunca v. Lutheran General Hospital*, 844 F.2d 411 (C.A.7, Ill., April 6, 1988)

COMMENT

Dare I Treat?

Sunday night. The patients emerge. Their numbered identity rests quietly in the computer and on the chart. Staff and residents have departed to their homes or the Emergency Room.

In the room my patient was in the second bed. Several times during the previous week, I had acknowledged the patient in the first bed with a greeting. I found her this time sitting on the side of the bed, fully clothed.

"Are you all right?"

"Sort of."

"Looks like you have been discharged."

"Yes. The resident discharged me earlier today."

"Are you waiting for your ride?"

"I don't have one."

"Can you call someone?"

"My family doesn't have a phone."

"What about a taxi?"

"I have no money to call one."

Sensing an impasse, I asked how she was feeling. "I still have some pain but I have a prescription."

Not my patient. Quickest response is to have the nurse call the House Officer. Doesn't seem to be the right decision. Considering the alternatives, I remembered some medications in my desk in another building. Dare I treat? Not my patient. No knowledge of allergies, past medical history, etc. Legally very precarious. No ground to stand on.

"Excuse me. I'll be back in a minute." As usual, no pocket cash. In the same desk with the drugs, a check. Twenty dollars.

Her eyes and voice expressed deep gratitude. Followup — none.

Dare I treat? Yes.

How? By something not limited by medical/legal constraints — *Compassion*. (In love do unto others as you would have them do unto you. . . . Love one another even as I have loved you.)

(Ed. Note: The commentary above was submitted by an MSMA member physician who requested anonymity, with the statement that it was the message, rather than the author, that was of importance.)



Thank
You

Doctor,

Have you ever looked for a different way to say "Thank You," "Congratulations," or "Get Well Soon"?

All of these messages are available, along with memorial tributes, in greeting cards from the MSMA Auxiliary. Each card signifies your donation to the AMA-ERF in the name of a friend or colleague.

For information about AMA-ERF greeting cards for year-round use, contact a member of your local MSMA Auxiliary, or Kathy Carmichael, 106 Colonial Place, Hattiesburg, MS 39401; telephone 268-9642.

MEDICAL ORGANIZATION

Plans Underway for MSMA's 121st Annual Session

Plans for MSMA's 121st Annual Session are nearly complete, and members will be receiving more detailed information in the weeks to come. The Annual Session is scheduled for May 31-June 4 at the Royal d'Iberville Hotel in Biloxi.

The agenda for the five-day session includes two meetings of the House of Delegates (Thursday and Sunday), reference committee hearings, and meetings of medical specialty societies and alumni organizations. Also on the calendar of activities are the annual programs of the Hospital Medical Staff Section and the Young Physicians Section, along with the Surgery Plenary Session and the Medicine Plenary Session.

Programs during the week will feature a number of nationally recognized authorities who will discuss such topics as: "M.D. Rights and Duties Under the Health Care Quality Improvement Act"; "Current Legal Issues for the Hospital Medical Staff"; "Hospital Medical Ethics Committees"; "Guidelines for Medical Practice"; and "The Physician Payment Review/Harvard Resource-Based Relative Value Study."

Scientific programs will offer CME credits in these areas of study: "Post-Op Pain Management," "Trauma Helicopters: Use and Abuse," "Use of MRI in Surgical Evaluation," "Office Management of Burns," "Arthroscopy: Early Management," "Epidemiology of Tick-Borne Diseases," "Lyme Disease," "ER Management of the Acutely Disturbed and Agitated Psychotic Patient," and "Gallstone Lithotripsy."

As in past years, the Annual Session will also feature technical and scientific exhibits, a meeting of the Mississippi Foundation for Medical Care, and the annual session of the MSMA Auxiliary.

Members will soon receive reservation cards, and are urged to make plans now to attend. More information will be published in future issues of the *Journal MSMA* and the "MSMA Report."

Funeral Services Held For Dr. Everett Crawford

Funeral services were held January 31 at Tylertown Baptist Church for MSMA Past President Everett H. Crawford, Sr., M.D., who died January 29 of a stroke.

Dr. Crawford, a Tylertown native, received his B.S. degree from Mississippi College in 1932 and a Master's degree from the University of Tennessee Medical School in 1936. He interned at John Gaston Hospital in Memphis.

After serving as a Navy doctor in the Pacific during World War II, he completed fellowships in surgery at Tulane Medical Center and Oschner's Foundation Clinic in New Orleans. He returned to Tylertown in 1948 to join his father and two brothers in medical practice.

In addition to serving as president of the MSMA, Dr. Crawford was a member and past chairman of the MSMA board of trustees. He was a member and past president of the South Central Medical Society as well as member and councilman of the Southern Medical Association. He also was a member of the American Medical Association.

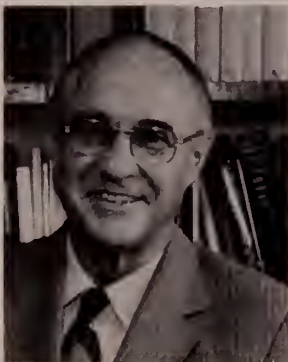
He was a member of the Tylertown Baptist Church, was a Mason and Shriner, and served several terms as trustee for the Walthall County School Board and the Tylertown School Board.

In 1977 Dr. Crawford received the Service to Humanity Award presented by Mississippi College in recognition of his accomplishments in the field of medicine and his contributions to his community.

He is survived by his wife, Frances; two daughters, Jane Ard of Tylertown and Anne Howell of Atlanta; and a son, Dr. E. Howell Crawford, Jr. of Hattiesburg. Other survivors include a sister, Dorothy Lott of Tylertown; brothers, Dr. Walter W. Crawford and Dr. Ben L. Crawford, II, both of Tylertown; and five grandchildren.

State to Honor Dr. Arthur Guyton

The world's three leading experts on high blood pressure will speak in Jackson August 25 to honor the Mississippian whose life work has been a study of the cardiovascular dynamics which control blood pressure.



Dr. Arthur C. Guyton, chairman of physiology and biophysics at the University of Mississippi Medical Center, has made fundamental discoveries about the cardiovascular system which have greatly increased our understanding of high blood pressure.

GUYTON TRIBUTE/Continued

Guest speakers at the 1:30 p.m. symposium Jackson Municipal Auditorium — part of Arthur Guyton Day — will be Dr. Edgar Haber, professor of medicine at Harvard and head of the cardiac unit at Massachusetts General Hospital; Dr. John Laragh, professor of medicine at Cornell University Medical Center; and Dr. Norman Kaplan, professor of Medicine at Southwestern Medical Center in Dallas.

The public is invited to both the symposium and a reception — also at city auditorium — for Dr. Guyton and his family which will immediately follow the scientific lectures.

An 11-member executive committee, chaired by retired Morton businessman Jack Stuart, is in charge of planning the event. Other members include James Campbell, chairman of the board of Mississippi School Supply; Dr. Wallace Conerly, UMC assistant vice chancellor; Bob Gordon, associate editor of the Clarion-Ledger, Jackson Daily News; George Hewes, partner in the law firm of Brunini, Grantham, Grower and Hewes; Alvis Hunt, president of Trustmark National Bank; Dr. Harvey Johnston, Jackson surgeon; Howard McMillan, president of Deposit Guaranty National Bank; J. C. Redd, founder of Redd Pest Control; J. W. (Bill) Underwood,

chairman of the board of J. W. Underwood, Inc., and Dr. James L. Royals, retired Jackson physician.

Committee chairman Stuart said, "Dr. Guyton is certainly one of our most outstanding Mississippians, and his family may be our state's most outstanding family. As he nears retirement, we thought it only fitting that the community come together to show its deep respect and gratitude for his many contributions."

Dr. Guyton is a native of Oxford, the son of Dr. Billy S. Guyton, dean of the medical school on the Oxford campus from 1936-1943. He graduated from Ole Miss with special distinction in 1939 and went on to medical school at Harvard. His postgraduate training in cardiac surgery was interrupted twice — once by a call to serve in the US Navy and again when he contracted paralytic polio.

After a period of convalescence, he returned to Oxford and the University faculty in 1947. He became chairman of the physiology department in 1948 and played a leading role in establishing and planning the University of Mississippi Medical Center which opened in 1955.

UMC vice chancellor Dr. Norman Nelson said, "His tenure at the Medical Center has been marked by a sincere commitment to the orderly growth of the institution, an abiding concern for students, and enough scientific accomplishments for 10 gifted individuals. He has also personally taught every medical student who graduated from the Medical Center."

Dr. Guyton's most famous work, *Textbook of Medical Physiology*, is used by more students worldwide than any other textbook. He has received many awards for research done in his department, the most recent of which was in 1988: the William Harvey Award for hypertension research from the American Society for Hypertension.

Dr. and Mrs. Guyton, the former Ruth Alice Weigle, are the parents of 10 children, all of whom had college careers of academic excellence and all of whom are physicians except the youngest, Greg, who is in pre-med at Vanderbilt University.

Carroll Brinson, the Jackson author of *Jackson, A Special Kind of Place*, and a biographer of other noted Mississippians, will write a commemorative book on Dr. Guyton, his family, and the events of August 25.

More information about Arthur Guyton Day is available from the office of the Arthur C. Guyton Day, Inc., P.O. Box 55562, Jackson, Mississippi 39296 or by phone, 353-1200. The office, in Suite 234 at the Holiday Inn Medical Center, will be open from noon-6 p.m. weekdays through September.

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5 Reasons Why You Should Go to Biloxi*

- 1. You Can Make Your Voice Heard.** The MSMA Annual Session is an opportunity to participate in your association's policy-making activities. Express your views at reference committee hearings. Participate in the representative process in the House of Delegates.
- 2. Get Information About Factors Affecting Your Practice.** Hear outstanding speakers discuss topics of interest to you. Listen to their suggestions about dealing with issues. Find out what's being done in your behalf. Here are a few topics you can expect this year:
 - "MD Rights and Duties Under the Health Care Quality Improvement Act"
 - "Current Legal Issues for the Hospital Medical Staff"
 - "Hospital Medical Ethics Committees"
 - "The Vermont Variations on Medical Practice Project"
 - "The Physician Payment Review/Harvard Resource Based Relative Value Study"
- 3. Obtain CME Credit.** Scientific programming and exhibits will provide updates in these areas and more:
 - "Epidemiology of Tick-Borne Diseases"
 - "Lyme Disease"
 - "E.R. Management of the Acutely Disturbed Psychotic Patient"
 - "Gallstone Lithotripsy"
 - "Trauma Helicopter: Use or Abuse?"
 - "Post-Op Pain Management"
 - "Use of MRI in Surgical Evaluation"
 - "Office Management of Burns"
 - "Current Concepts in Arthroscopy"
- 4. Join Your Colleagues . . .** for medical alumni reunions and specialty society meetings.
- 5. Your Family Will Enjoy the Special Events.** The program includes tennis, golf, deep-sea fishing, and other special activities, including opportunities to enjoy the sun, fun, and atmosphere of the Gulf Coast.

***For MSMA's 121st Annual Session, May 31-June 4, at the
Royal d'Iberville Hotel.**

POSTGRADUATE CALENDAR

March

ROLE OF NUTRITION IN HIGH PERFORMANCE LIVING

March 31

University Medical Center

NEUROLOGY SPRING SYMPOSIUM

March 31-April 1

Ramada Renaissance Hotel, Jackson

April

P.A.L.S. PROVIDER COURSE

April 6-7

University Medical Center

OPHTHALMIC SPRING MEETING

April 8

Ramada Renaissance Hotel, Jackson

RENAL UPDATE

April 21-22

Ramada Inn Coliseum

For more information or a program brochure, contact the University of Mississippi Medical Center Division of Continuing Health Professional Education, 2500 North State Street, Jackson, Mississippi 39216-4505; or call (601) 984-1300.

Review A Book

The following books have been received by the JOURNAL MSMA. Members of MSMA interested in reviewing one of these volumes should address requests to the Editor. After submitting a review for publication, you may keep the book for your personal library.

Disease and Distinctiveness in the American South. Todd L. Savitt and James Harvey Young. University of Tennessee Press, 1988.

Medical Mavericks, Volume 1. Hugh D. Riordan, M.D., Wichita, Kansas: The Olive W. Garvey Center, 1988.



BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

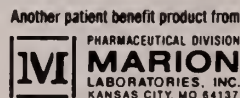
HOW SUPPLIED

CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by Cs on the other.

Issued 1/87

Reference:

1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399



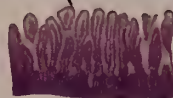
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Unique, nonsystemic


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sucralfate/Marion

**ROSALYN P. STERLING-SCOTT, M.D.**

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

“The caliber of physicians you meet in the Army Reserve exposes you to new ways of looking at a problem. It's easy for young surgeons to become entrenched in one method, but in the Army Reserve you'll have the chance to work with outstanding physicians in your own specialty, and often learn new ideas that will help you to improve your own approach to clinical or research problems,” says Dr. Sterling-Scott.

The Army Reserve can offer physicians a variety of challenging options such as teaching, research, unique training programs, and the opportunity to practice in prestigious Army medical centers.

“Joining the Army Reserve enabled me to take advantage of a number of conferences, including one at Walter Reed, where I worked with thoracic surgical colleagues, while conducting my own research project.”

We understand the time demands on a busy physician. So the Army Reserve offers training programs that will allow you to be flexible about the time you serve.

For more information about specific programs, call toll-free 1-800-USA-ARMY.

**ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.**



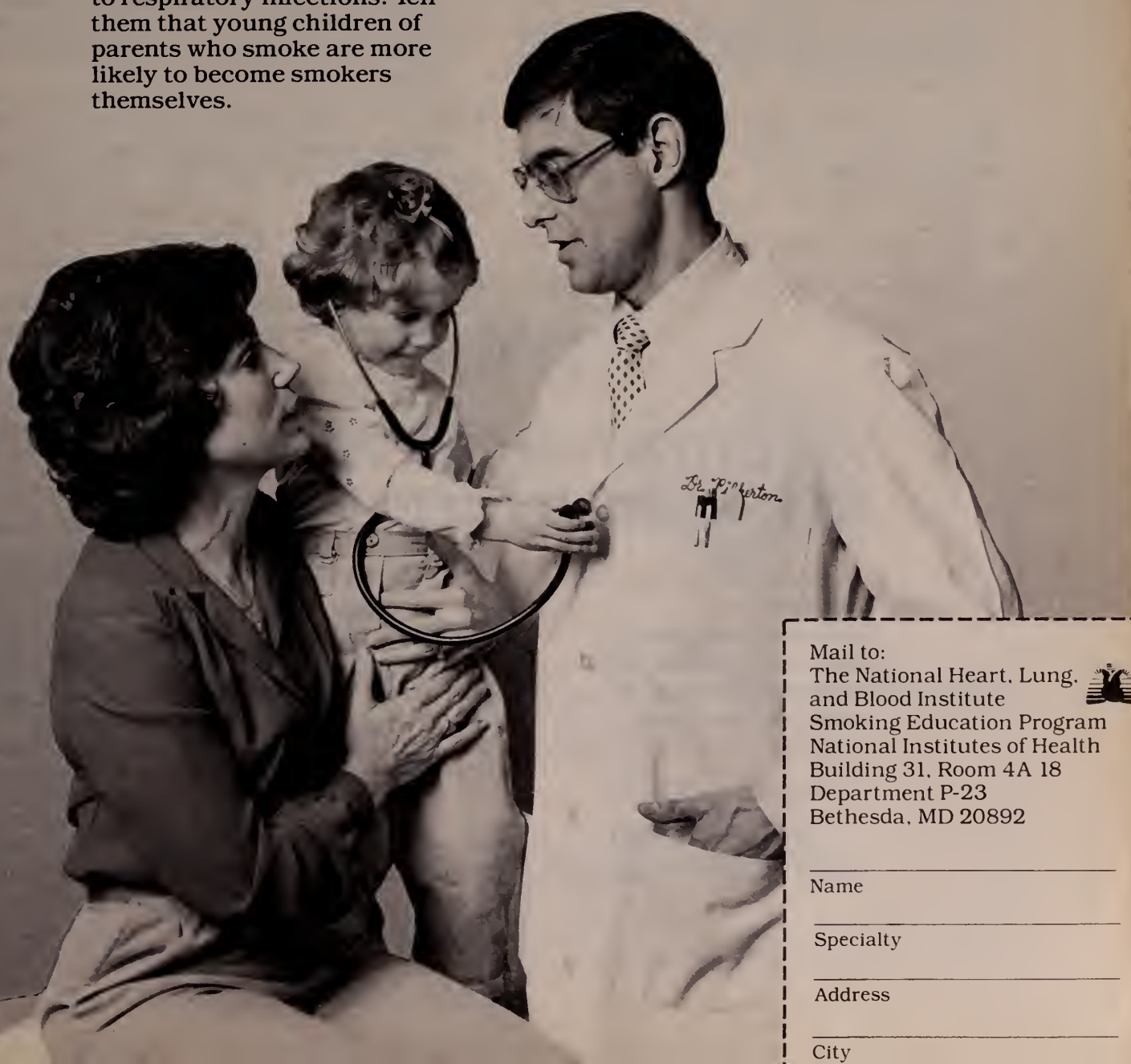
A Clinical Opportunity for Smoking Intervention

You can play a special role in reaching smokers. Encouraging parents not to smoke can improve the health of the entire family.

Take a few minutes to explain that children of parents who smoke are often more prone to respiratory infections. Tell them that young children of parents who smoke are more likely to become smokers themselves.

The minutes you spend can make a difference now, and in the years ahead.

For a free copy of *Clinical Opportunities for Smoking Intervention: A Guide for the Busy Physician*, complete the form below.



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The National Heart, Lung, and Blood Institute
Smoking Education Program
National Institutes of Health
Building 31, Room 4A 18
Department P-23
Bethesda, MD 20892



Name

Specialty

Address

City

PERSONALS

VINOD ANAND of UMC gave a presentation at the Annual Conference of Otolaryngologists of India in Mysore, India.

TED BLANTON of Jackson spoke on AIDS at First United Methodist Church in Brookhaven.

HOWARD CHEEK of Jackson has been elected to the board of River Oaks Hospital.

WALLACE CONERLY was a site visitor for the Joint Review Committee for Respiratory Therapy Education at Central Piedmont Community College in Charlotte, North Carolina.

RALPH DANIEL, III of Jackson presented a seminar on nail disorders for the Department of Dermatology at Tulane University.

SUMAN DAS of UMC attended a program directors meeting of Plastic and Reconstructive Surgeons in St. Louis, Missouri.

OWEN EVANS of UMC gave pediatric grand rounds at Vanderbilt University in Nashville.

CARL EVERS of UMC has been elected to the executive committee of Gynecologic Oncology Group.

WILLIAM R. FELLOWS of Biloxi has been named director of CPC Sand Hill Hospital's Chemical Dependency Program.

JEFFREY FOSS of Biloxi has been certified as a diplomate of the American Board of Internal Medicine.

HOWARD FREEMAN of Jackson was guest speaker for a program on anxiety sponsored by Charter Counseling Center of Vicksburg.

WALTER C. GOUGH of Drew has been named a member of The Luke Society, Inc., an international organization of Christian physicians, dentists and nurses.

ARMIN HAERER of UMC was examiner for the American Board of Psychiatry and Neurology in Chicago.

TOURO INFIRMARY

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Referrals/Info

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R.H. Morse, M.D.

Medical Director

HARPER HELLEMS of UMC received the Founder's Medal from the Southern Society for Clinical Investigation. The award is presented annually to physicians who have made landmark contributions in their fields of endeavor.

G. ELI HOWELL, II of Hattiesburg attended the Fifth Annual Breast Surgery Symposium of the Southeastern Society of Plastic and Reconstructive Surgeons and the Plastic Surgery Educational Foundation.

ROBERT P. MATHIS of Tupelo has been certified as a diplomate of the American Board of Surgery.

S. H. McDONNIEAL, JR. of Jackson announces his retirement from the practice of internal medicine and the transfer of his practice to G. B. DELASHMENT, JR.

GLENN MORRIS of Jackson has been elected to the board of River Oaks Hospital.

JOHN MORRISON of UMC spoke to the Roanoke (Virginia) Ob-Gyn Society.

CHARLES J. PARKMAN of Hattiesburg spoke at the Tri-State Consecutive Case Conference in Biloxi.

NICHOLAS QUINIF of Greenville recently was named 1988 Doctor of the Year by the Mainstream Chapter of the Mississippi Society of Medical Assistants.

SESHADRI RAJU of UMC spoke on organ transplantation at Tougaloo College and presented a paper at a meeting in Key West of the Southern Association for Vascular Surgery.

ROBERT RHODES of UMC presented grand rounds at the University of Medicine and Dentistry of New Jersey and also spoke at a meeting of the Wilkinson-Amite County Medical Society in Centreville.

G. T. SHEFFIELD of Biloxi was honored at a reception in honor of his 96th birthday at First Baptist Church in Gulfport.

DAVID STECKLER of Natchez spoke on AIDS at the annual meeting of the Miss-Lou Mental Health Association.

THOMAS C. STRONG has associated with Gamble Brothers and Archer Clinic in Greenville, for the practice of general surgery.

DAVID THOMAS of UMC presented a program on geriatrics in Corinth.

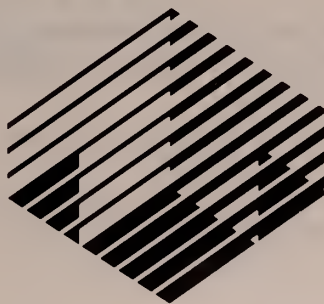
MARCH 1989

PLEZ TINSLEY of Meridian has been appointed clinical assistant professor in surgery at the University of Texas Health Science Center in San Antonio.

W. LAMAR WEEMS of UMC served as a panel member for the National Library of Medicine's Planning Panel on Outreach Programs in Bethesda, Maryland.

DEATHS

LEIST, STEVE CHARLES, Lyon. Born Vicksburg, MS, Aug. 18, 1921; M.D., University of Tennessee School of Medicine, Memphis, 1953; interned Methodist Hospital, Memphis, one year; died January 4, 1989, age 67.



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Frank Cochran

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NEW MEMBERS

BLACKSTON, JOSEPH WALKER, Oxford. Born Greenville, SC, Sept. 2, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned one year, Baptist Memorial Hospital, Memphis; elected by North Mississippi Medical Society.

BLANKS, THOMAS SIMMONS, Gulfport. Born Magnolia, MS, May 20, 1954; M.D., University of Mississippi School of Medicine, Jackson, 1979; interned and medicine residency, Baylor University Medical Center, Dallas, 1979-82; elected by Coast Counties Medical Society.

CARR, MARTHA ANN, Biloxi. Born Roanoke, VA, April 1, 1954; M.D., Tulane University School of Medicine, New Orleans, 1980; interned, medicine residency and cardiology fellowship, Tulane Hospital, New Orleans, 1980-87; elected by Coast Counties Medical Society.

COMPTON, DAVID ALAN, Liberty. Born Glasgow, KY, Feb. 16, 1947; M.D., University of Kentucky

College of Medicine, Lexington, 1980; interned and family practice residency, Trover Clinic, Madisonville, KY, 1980-84; elected by Amite-Wilkinson Co. Medical Society.

COOPER, JOHN ROSS, Greenwood. Born St. Louis, MO, Oct. 19, 1942; M.D., University of Iowa College of Medicine, Iowa City, 1967; interned, diagnostic radiology residency and cardiovascular radiology fellowship, University of Oregon, Portland, 1967-68 and 1971-74; elected by Delta Medical Society.

CRAWFORD, EVERETT H., JR., Hattiesburg. Born Tylertown, MS, Jan. 1, 1957; M.D., University of Mississippi School of Medicine, Jackson, 1983; interned, medicine residency, and gastroenterology fellowship, University Medical Center, Jackson, 1983-88; elected by South Mississippi Medical Society.

CRAWFORD, VIRGINIA MOFFITT, Hattiesburg. Born Jackson, MS, June 5, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1983; interned and medicine residency, University Medical Center, Jackson, 1983-86; elected by South Mississippi Medical Society.

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NEW MEMBERS/Continued

DE NAPLES, MARK ANTHONY, Columbus. Born Atlantic City, NJ, March 22, 1936; M.D., Jefferson Medical College of Thomas Jefferson University, Philadelphia, PA, 1962; interned and 1-year surgery residency, Lankenay Hospital, Philadelphia, PA; neurological surgery residence, University of Virginia Hospital, Charlottesville, 1966-70; elected by Prairie Medical Society.

FARINA, JOSEPH WILLIAM, Hattiesburg. Born Reading, PA, May 17, 1954; M.D., University of South Alabama College of Medicine, Mobile, 1984; interned and neurology residency, same, 1984-88; elected by South Mississippi Medical Society.

FOKAKIS, ARTHUR, N., Hattiesburg. Born Hattiesburg, MS, Aug. 21, 1946; M.D., University of Mississippi School of Medicine, Jackson, 1979; interned and medicine residency, Keesler AFB, MS, 1979-82; allergy-immunology fellowship Wilford Hall USAF, Texas, 1982-84; elected by South Mississippi Medical Society.

FRY, MATTHEW G., Hattiesburg. Born Houston, TX, Jan. 10, 1957; M.D., University of Texas Medical School, San Antonio, 1982; interned and urology residency, Louisiana State University Medical Center, Shreveport, 1982-88; elected by South Mississippi Medical Society.

GRANT, FREDERICK Y., Meridian. Born Meridian, MS, July 4, 1953; M.D., University of South Alabama School of Medicine, Mobile, 1979; interned one year, Druid City, AL; ob-gyn residency, Carraway Methodist Hospital, Birmingham, AL, 1981-84; elected by East Mississippi Medical Society.

GRISWOLD, JOHN ANTHONY, Jackson. Born Casper, WY, Jan. 15, 1955; M.D., Creighton University School of Medicine, Omaha, NE, 1981; interned and surgery residency, Texas Tech Health Science Center, Lubbock, 1981-86; burn fellowship, University of Washington, Seattle, 1986-88; elected by Central Medical Society.

HARRIS, DAVID ASHER, Biloxi. Born New Rochelle, NY, July 17, 1956; M.D., University of Mississippi School of Medicine, Jackson, 1982; interned and anesthesiology residency, same, 1982-85; elected by Coast Counties Medical Society.

HUMBLE, ROBERT LEE, Vicksburg. Born Monroe, LA, Aug. 11, 1955; M.D., Louisiana State University School of Medicine, Shreveport, 1982; interned and urology residency, same, 1982-88; elected by West Mississippi Medical Society.

KRONFOL, N.O., Greenville. Born Beirut, Lebanon, July 29, 1950; M.D., American University of Beirut Medical School, Lebanon, 1975; interned and medicine residency, same, 1974-77; renal fellowship, Richmond, VA, 1977-80; elected by Delta Medical Society.

MAHAFFEY, EARL LESLIE, Jackson. Born Jackson, MS, Oct. 15, 1952; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned and family medicine residency, same, 1984-87; elected by Central Medical Society.

REED, ELDON S., Jackson. Born Guthrie Center, IA, April 11, 1938; M.D., University of Iowa College of Medicine, Iowa City; interned one year, Good Samaritan Hospital, Phoenix, AZ; anesthesiology residency, University of Iowa, Iowa City, 19967-69; elected by Central Medical Society.

ROBINSON, SAMUEL P., Gulfport. Born Shreveport, LA, Aug. 10, 1951; M.D., Tulane University School of Medicine, New Orleans, 1976; interned and one year surgery residency, Maricopa County General Hospital, Phoenix, AZ, 1976-78; otolaryngology residency, Tulane Hospitals, New Orleans, LA, 1978-81; elected by Coast Counties Medical Society.

UNDESSER, CYNTHIA L., Brandon. Born Texas, Nov. 7, 1951; M.D., University of Texas School of Medicine, Galveston, 1983; interned and psychiatry residency, University of Texas, San Antonio, 1983-88; elected by Central Medical Society.

WATERER, REBECCA J., Whitfield. Born Amory, MS, Jan. 27, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and medicine residency, same, 1985-88; elected by Central Medical Society.

March 30 — Doctor's Day

Miracles

in the Art of Healing

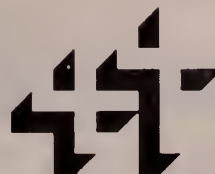
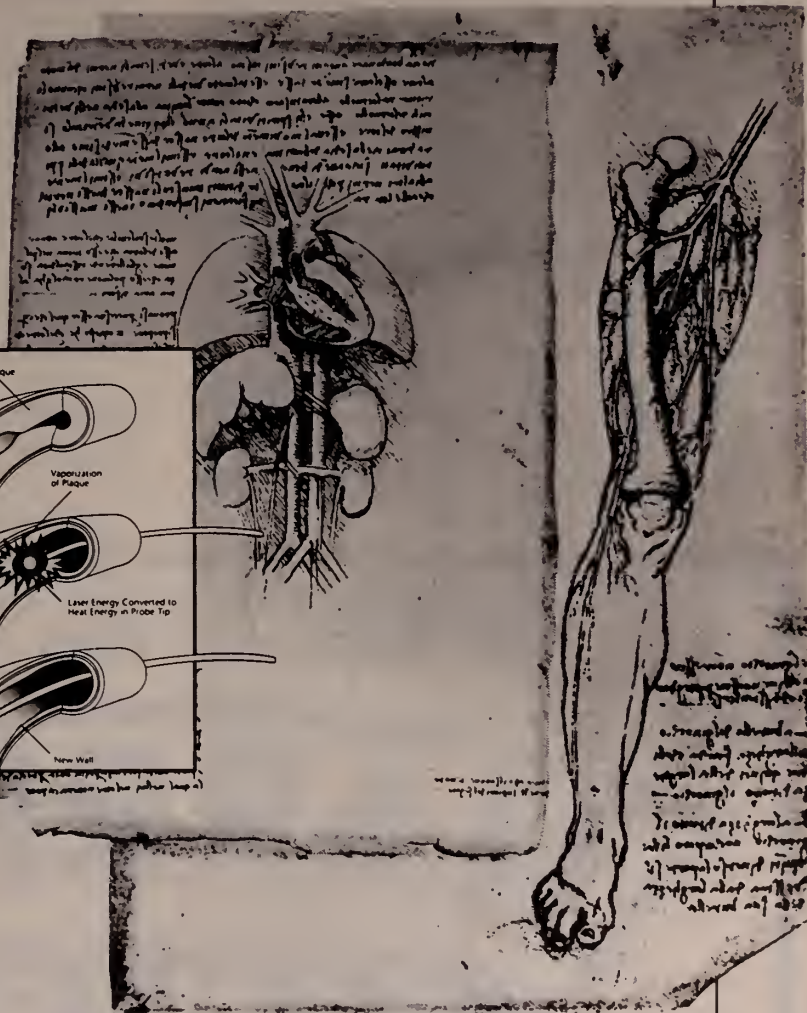
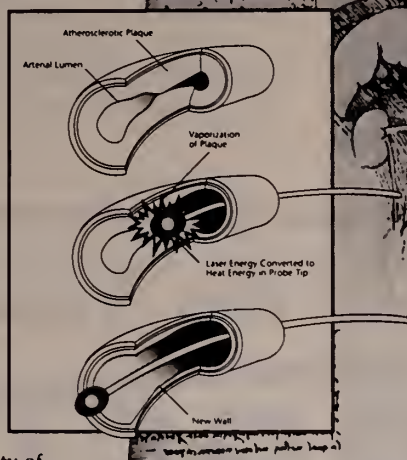
Leonardo da Vinci was an artist, an engineer, an architect, and an innovator in science and medicine. Creating his own methods of dissection and research, Leonardo developed an understanding of human anatomy and the cardiovascular system which remained unequalled for at least two centuries after his death in 1519.

In the tradition of Leonardo da Vinci and the medical scientists who have followed him, St. Dominic Hospital announces two new techniques in the treatment of cardiovascular disease.

Laser angioplasty is a low-risk, non-surgical procedure which "vaporizes" arterial blockages in the limbs. Generally performed under a local anesthetic, it requires only a few days in the hospital and costs much less than a standard bypass operation.

TPA (Tissue Plasminogen Activator) and other clot-dissolving drugs eliminate blood clots during the early stage of a heart attack. They assist the body's own clot-dissolving mechanism to help reduce heart damage and increase the patient's probability of survival.

Mississippi Cardiovascular Connection is an outreach program of St. Dominic Hospital which provides community hospitals in Mississippi with the newest developments in the treatment of cardiovascular disease. Laser angioplasty and TPA along with coronary and peripheral balloon angioplasty, heart catheterization, and open heart surgery, are a few of the many effective weapons used at St. Dominic Hospital to fight America's number one killer, cardiovascular disease. And through this broad cooperative network of Mississippi hospitals, physicians, and health care professionals, St. Dominic is extending these lifesaving technologies throughout the state.



The Mississippi Heart Institute
at
St. Dominic Hospital

RECOLLECTIONS

Twenty years ago, the Journal's pages included articles on several health and medical care issues of growing importance throughout the nation. Interestingly, these articles (on tobacco use, abortion reform, emerging medical technology, and the growing volume of paperwork in medical care) served as predictors of issues that the nation would still be grappling with today.

In that March 1969 issue, there was a report of an organization carrying the deceptively passive acronym ASH (Action on Smoking and Health) that had begun vigorously militant efforts to battle tobacco use in the United States. Sponsored by some 30 physicians, attorneys, scientists and educators, ASH was taking up as its primary weapon the lawsuit. The group's announced intention was to use lawsuits for the purposes of: helping those who claimed damage from smoking to receive compensation; forcing tobacco manufacturers to pay the bill in court judgments; and requiring cigarette makers to warn the public of the dangers of smoking. ASH

was headed by an attorney who had already achieved significant success in this area, when in 1967 his complaint resulted in the FCC ruling that broadcasters of cigarette advertisements must furnish "equal time" without charge to responsible groups with a case to make against smoking. He described efforts to move beyond the courts and the FCC to enlist help from other executive agencies, including requesting the FDA's Bureau of Narcotics and Dangerous Drugs to hold hearings and explore the substantial body of evidence pointing toward smoking's addictive nature.

An editorial describing the growing problem of paperwork associated with health insurance and government-sponsored medical care programs predicted computer-assisted solutions to the problem, including teleprocessing techniques involving phone lines. The editorial pointed out the need for physicians to "maintain their voices in the socioeconomic affairs of their profession," in order to develop solutions that would preserve the patient-physician relationship.

Abortion reform was an issue that was being hotly debated in legislatures across the nation, and the March 1969 editorial pages reminded that "abortion

(Continued on page 102)

"A Sign of the Times!"



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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 18-22, 1989, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 121st Annual Session, May 31-June 4, 1989, Biloxi. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, Aug. 2-6, 1989, Gulf Shores, AL. Mrs. Alyce Palmore, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. H. S. Barrett, Secy., P.O. Box 1810, Gulfport 39501. Counties: Hancock, Harrison, Stone.

Delta Medical Society, 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSoto County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Enrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avenet Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Granada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. David H. Irwin, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. W. A. Spencer, Secy., 2161 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Jack Hollister, Secy., P.O. Box 9000, Columbus 39705. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. John J. McClosky, Secy., 3003 Short Cut Rd., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society, 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Wayne M. Pitre, Secy., 1202 Mission Park Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials for Accreditation of Institutions and Organizations Offering Continuing Medical Education Programs" of the Liaison Committee on Continuing Medical Education. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

Council on Scientific Assembly
Mississippi State Medical Association
735 Riverside Drive
Jackson, MS 39202

North Mississippi Medical Center
830 Gloster Avenue
Tupelo, MS 38801

Forrest General Hospital
Box 1897
Hattiesburg, MS 39401

Mississippi Baptist Medical Center
1225 N. State Street
Jackson, MS 39201

Gulf Coast Community Hospital
4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Box 1488
Natchez, MS 39120

King's Daughter Hospital
Box 948
Brookhaven, MS 39601

Riverside Hospital
Lakeland Drive
Jackson, MS 39208

Biloxi Regional Medical Center
1559 Lafayette St.
Biloxi, MS 39533

Jeff Anderson Regional Medical Center
2124 14th St.
Meridian, MS 39301

Northwest Mississippi Regional Medical Center
Box 1218
Clarksdale, MS 38614

North Panola County Hospital
Drawer 160
Sardis, MS 38666

Singing River Hospital
P.O. Box 112
Pascagoula, MS 39567

Magnolia Hospital
Alcorn Drive
Corinth, MS 38834

Greenwood Leflore Hospital
1508 Leflore Avenue
Greenwood, MS 38930

Gulfport Memorial Hospital
4500 13th Street
Gulfport, MS 39501

Oxford-Lafayette County Hospital
P.O. Box 946
Oxford, MS 38655

St. Dominic-Jackson Memorial Hospital
969 Lakeland Dr.
Jackson, MS 39216

Delta Medical Center
P.O. Box 5247
Crossroads Station
Greenville, MS 39704-5247

Methodist Hospital
P.O. Box 1311
Hattiesburg, MS 39401

Counsel to Authors

THE JOURNAL welcomes manuscripts which should be submitted to the Editors at 735 Riverside Drive, Jackson, MS 39216, in original and at least one duplicate copy. They must be typewritten double spaced on 8½ by 11-inch white paper. **Brief manuscripts (about 2,500 words or 8 pages) will be given preference over longer articles.**

The author is responsible for all statements made in his work, including changes made by the manuscript editor. Manuscripts are received with the understanding that they are not under simultaneous consideration by any other publication and have not been previously published. All manuscripts will be acknowledged, and while those rejected are generally returned to the author, the JOURNAL is not responsible in event of loss. Manuscripts accepted for publication become the property of the JOURNAL and are copyrighted by the association when published. They may not be published elsewhere without written release and permission from both the JOURNAL and the author.

All copy must be double spaced, including legends, footnotes, and references. Generous margins at the top, bottom, and on both sides of the page should be allowed. Each page after the title page should be consecutively numbered and carry a running head identifying the paper and author.

Titles should be short, specific, and clear. Ordinarily, a title should not exceed 80 characters, including punctuation.

References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list. Textbooks, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the *Index Medicus*, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

Manuscripts accepted for publication are subject to copy editing. Authors will receive galley proof prior to publication. Galley proof is only for correction of errors, and text changes

may not be made. The galley proof should be returned by the author within 48 hours from receipt, and no further changes may be made.

Illustrations consist of all material which cannot be set into type such as photographs, line drawings, graphs, charts, and tracings. Illustrations should be submitted separately from text copy. Figures and drawings should be professionally prepared with black ink on white paper. Photographs should be of high resolution, unmounted, untrimmed, glossy prints. Each must be clearly identified. No charges are made to authors for up to four illustration engravings. More are not permitted unless voted on by two editors and extra costs must be absorbed by the author.

Illustrations must be numbered and cited in the text. Legends, not exceeding 40 words and preferably shorter, must accompany each illustration, typed double spaced on separate sheets. The following information should appear on a gummed label affixed to the back of each illustration: Figure number, manuscript title, author's name, and arrow indicating top of the illustration.

In photographs in which there is any possibility of personal identification, an acceptable legal release must accompany the material.

A thesis summary of 75 to 100 words must accompany each manuscript.

Reprints may be obtained at cost plus shipping charges from the association and **should be ordered prior to publication.** The JOURNAL reserves the right to decline any manuscript. Authors should avoid placing subheads in the text, and the Editors reserve the prerogative of writing and inserting subheads according to JOURNAL style. — *The Editors.*

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Mississippi State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript. — *The Editors.*

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MFMF03

RECOLLECTIONS/(Continued from page 98)

is a subject of medical interest where physicians possess an acute awareness of the accompanying nonmedical overtones."

The emergence of medical technological advances prompted a representative of the National Institutes of Health to offer predictions for medicine in the 1970's. He believed that skilled surgical teams would continue to astound the nation in organ transplantation, and in view of problems such as availability of donor organs and the rejection phenomenon, he projected substantial gains in workable artificial organ replacements. He anticipated progress in development of anticancer agents and great advances in radiology with thermography and ultrasound. The article concluded that "since medicine stands always on the threshold of discovery in the success of a single investigator," it is likely that the speaker's estimates might turn out to be conservative.



DOCTOR,

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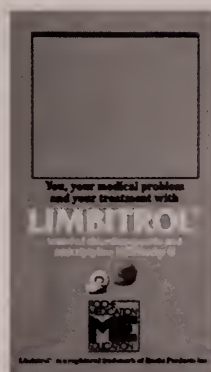


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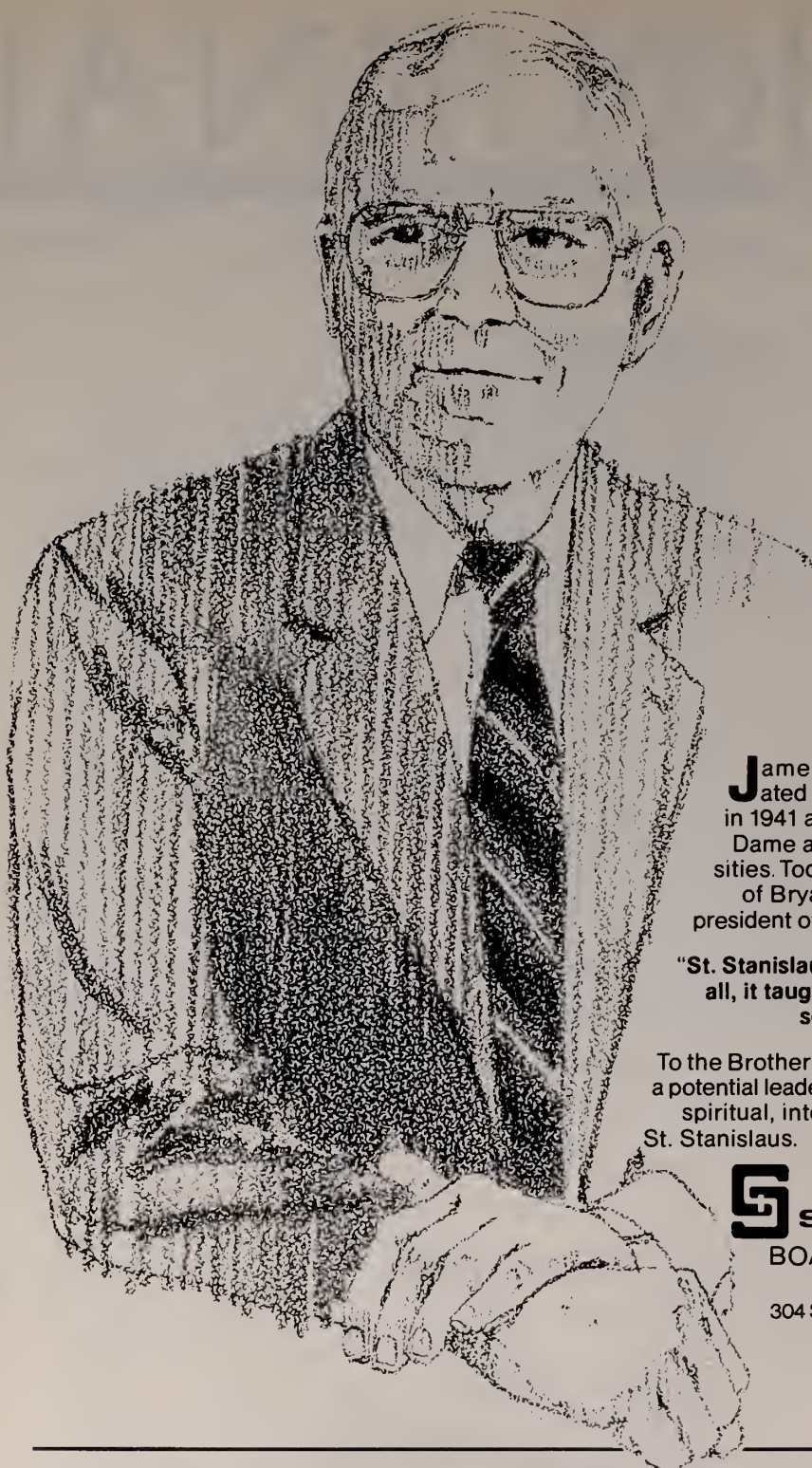
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THE JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION (ISSN 0026-6393) is owned and published monthly by the Mississippi State Medical Association, founded 1856, at 735 Riverside Drive, Jackson, Mississippi 39202. Subscription rate, \$25.00 per annum; \$35.00 per annum for foreign subscriptions; \$2.25 per copy, as available. Advertising rates furnished on request. Printed by The David Bell Press, Inc., Fulton, Missouri. Second-class postage paid at Jackson, Mississippi, and at additional mailing offices. POSTMASTER: Send address changes to Mississippi State Medical Association, P.O. Box 5229, Jackson, Mississippi 39216.



James J. Bryan graduated from St. Stanislaus in 1941 and attended Notre Dame and Tulane Universities. Today, he is president of Bryan Chevrolet, and has served as vice-president of the St. Stanislaus Alumni Association.

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NEWSLETTER

April 1989

Dear Doctor:

The AMA has persuaded Medicare to delay until June 1 the requirement to use ICD-9-CM (medical diagnosis codes) on all claim forms. The mandatory changeover to ICD-9-CM coding was apparently a little-known addition to the Medicare Catastrophic Act of 1989 which has only recently been publicized to Medicare carriers by the Health Care Financing Administration.

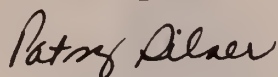
To assist physicians' office personnel in making the change, MSMA and Travelers Medicare have cooperated in scheduling a series of workshops about the coding requirement. The workshops are set for this month.

Medicare has announced an incentive payment program for physicians who render covered services in Class I or Class II rural Health Manpower Shortage areas. Physicians in these areas will receive a five percent bonus payment for services provided after January 1, 1989. The incentive payments pertain to both assigned and non-assigned claims. The following Mississippi counties are currently included in the program: Amite, Benton, Bolivar (Rosedale area only), Carroll, Claiborne, Itawamba, Jefferson Davis, Kemper, Lamar, Marshall, Neshoba, Smith, Tallahatchie and Tunica.

MSMA now offers the lowest cost group health insurance available to physicians, their office staffs and dependents. If you are now providing or wish to provide group health insurance for yourself and your employees, contact MSMA for a quote.

Be sure to make your plans now to attend MSMA's 121st Annual Session. Cards for room reservations were mailed with the March 22 "MSMA Report," and the hotel is filling up quickly. Information about the program is included in this issue of the Journal. The five-day meeting includes House of Delegates sessions, specialty society meetings, CME presentations, and meetings of the Hospital Medical Staff Section and the Young Physicians Section. This year's program also includes special activities for the children.

Sincerely,



Patsy Silver
Managing Editor

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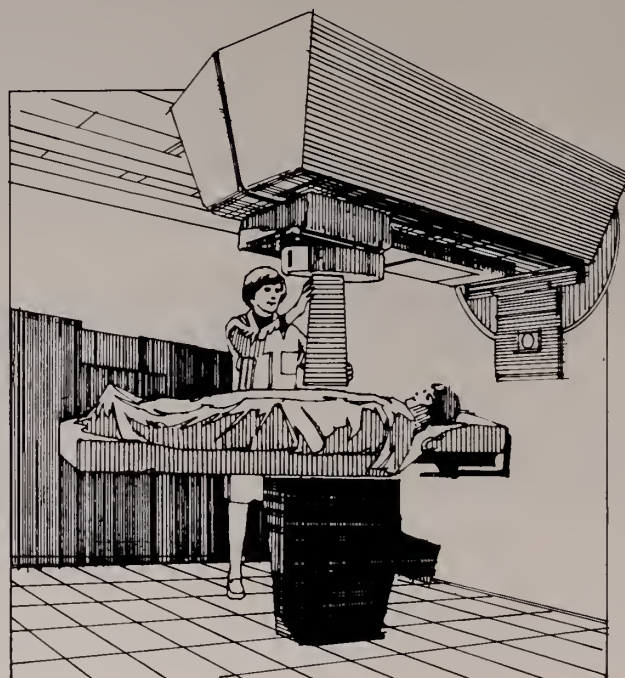
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DATELINE

New Appointments At Federal Health Offices

Washington, DC - On March 1, the U.S. Senate approved Louis W. Sullivan, M.D., as the new Secretary of the Department of Health and Human Resources. Sullivan is the former president of the Department of Medical School. Dr. William Roper, former head of HCFA, has become special assistant to the president for health affairs. Most likely candidate to succeed Roper is Sheila Burke, R.N., an aide to Sen. Robert Dole.

AMA States Policies on Insurance, Self-Referrals

Chicago, IL - AMA's Board of Trustees has endorsed a phase-in requirement that all employers provide health insurance coverage for all full-time employees. This is part of the AMA's policy to assure that basic health insurance coverage is extended to the estimated 37 million Americans who now lack this protection...In testimony before Congress, the AMA has opposed an outright ban on physician self-referrals.

New Medicare Publication Available from AMA

Chicago, IL - Medicare Carrier Review: What Every Physician Should Know is a new publication offered by the AMA to help physicians and their staffs better understand Medicare's medical necessity requirements and the carrier review process in general. The book was developed with technical assistance from HCFA. To order, contact the AMA and ask for OP-198.

New Approaches to Reducing Smoking

Chicago, IL - The anti-anxiety drug buspirone may help smokers cut down on cigarettes by easing tobacco withdrawal symptoms, says a letter in the March Archives of General Psychiatry. The letter said the drug seemed to curb the anxiety, irritability and fatigue associated with tobacco withdrawal. The authors suggested a controlled, double-blind test of the drug.

MSMA Auxiliary Seeks Volunteers for Support Group

Jackson, MS - The MSMA Auxiliary is now seeking volunteers to take part in a "Sharing Support Network" to help medical families cope with the stress of a malpractice suit. Resource materials will be available, having been developed by other such networks across the country. To be successful, the Network needs physicians' spouses who are willing to share their own experiences. Contact MSMA to volunteer.

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- Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). An acute study of oral diltiazem in patients with impaired ventricular function (ejection fraction 24% ± 6%) showed improvement in indices of ventricular function without significant decrease in contractile function (dp/dt). Experience with the use of CARDIZEM (diltiazem hydrochloride) in combination with beta-blockers in patients with impaired ventricular function is limited. Caution should be exercised when using this combination.
- Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
- Acute Hepatic Injury.** Mild elevations of transaminases with and without concomitant elevation in alkaline phosphatase and bilirubin have been observed in clinical studies. Such elevations were usually transient and frequently resolved even with continued diltiazem treatment. In rare instances, significant elevations in enzymes such as alkaline phosphatase, LDH, SGOT, SGPT, and other phenomena consistent with acute hepatic injury have been noted. These reactions tended to occur early after therapy initiation (1 to 8 weeks) and have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in some cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes, however, these changes were reversible with continued dosing. Dermatological events (see ADVERSE REACTIONS section) may be transient and may disappear despite continued use of CARDIZEM. However, skin eruptions progressing to erythema multiforme and/or exfoliative dermatitis have also been infrequently reported. Should a dermatologic reaction persist, the drug should be discontinued.

Drug Interaction. Due to the potential for additive effects, caution and careful titration are warranted in patients receiving CARDIZEM concomitantly with any agents known to affect cardiac contractility and/or conduction. (See WARNINGS.) Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

As with all drugs, care should be exercised when treating patients with multiple medications. CARDIZEM undergoes biotransformation by cytochrome P-450 mixed function oxidase. Coadministration of CARDIZEM with other agents which follow the same route of biotransformation may result in the competitive inhibition of metabolism. Doses of similarly metabolized drugs, particularly those of low therapeutic ratio or in patients with renal and/or hepatic impairment,

may require adjustment when starting or stopping concomitantly administered CARDIZEM to maintain optimum therapeutic blood levels.

Beta-blockers: Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated, but available data are not sufficient to predict the effects of concomitant treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities.

Administration of CARDIZEM (diltiazem hydrochloride) concomitantly with propranolol in five normal volunteers resulted in increased propranolol levels in all subjects and bioavailability of propranolol was increased approximately 50%. If combination therapy is initiated or withdrawn in conjunction with propranolol, an adjustment in the propranolol dose may be warranted. (See WARNINGS.)

Cimetidine: A study in six healthy volunteers has shown a significant increase in peak diltiazem plasma levels (58%) and area-under-the-curve (53%) after a 1-week course of cimetidine at 1,200 mg per day and diltiazem 60 mg per day. Ranitidine produced smaller, nonsignificant increases. The effect may be mediated by cimetidine's known inhibition of hepatic cytochrome P-450, the enzyme system probably responsible for the first-pass metabolism of diltiazem. Patients currently receiving diltiazem therapy should be carefully monitored for a change in pharmacological effect when initiating and discontinuing therapy with cimetidine. An adjustment in the diltiazem dose may be warranted.

Digitalis: Administration of CARDIZEM with digoxin in 24 healthy male subjects increased plasma digoxin concentrations approximately 20%. Another investigator found no increase in digoxin levels in 12 patients with coronary artery disease. Since there have been conflicting results regarding the effect of digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing CARDIZEM therapy to avoid possible over- or under-digitalization. (See WARNINGS.)

Anesthetics: The depression of cardiac contractility, conductivity, and automaticity as well as the vascular dilation associated with anesthetics may be potentiated by calcium channel blockers. When used concomitantly, anesthetics and calcium blockers should be titrated carefully.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in *in vitro* bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded from these studies.

The adverse effects described below represent events observed in clinical studies of hypertensive patients receiving either CARDIZEM Tablets or CARDIZEM SR Capsules as well as experiences observed in studies of angina and during marketing. The most common events in hypertension studies are shown in a table with rates in placebo patients shown for comparison. Less common events are listed by body system, these include any adverse reactions seen in angina studies that were not observed in hypertension studies. In all hypertensive patients studied (over 900), the most common adverse events were edema (9%), headache (8%), dizziness (6%), asthenia (5%), sinus bradycardia (3%), flushing (3%), and 1° AV block (3%). Only edema and perhaps bradycardia and dizziness were dose related. The most common events observed in clinical studies (over 2,100 patients) of angina patients and hypertensive patients receiving CARDIZEM Tablets or CARDIZEM SR Capsules were (ie, greater than 1%) edema (5.4%), headache (4.5%), dizziness (3.4%), asthenia (2.8%), first-degree AV block (1.8%), flushing (1.7%), nausea (1.6%), bradycardia (1.5%), and rash (1.5%).

Adverse	Diltiazem N=315 # pts (%)	Placebo N=211 # pts (%)
headache	38 (12%)	17 (8%)
AV block first degree	24 (7.6%)	4 (1.9%)
dizziness	22 (7%)	6 (2.8%)
edema	19 (6%)	2 (0.9%)
bradycardia	19 (6%)	3 (1.4%)
ECG abnormality	13 (4.1%)	3 (1.4%)
asthenia	10 (3.2%)	1 (0.5%)
constipation	5 (1.6%)	2 (0.9%)
dyspepsia	4 (1.3%)	1 (0.5%)
nausea	4 (1.3%)	2 (0.9%)
palpitations	4 (1.3%)	2 (0.9%)
polyuria	4 (1.3%)	2 (0.9%)
somnolence	4 (1.3%)	—
alk phos increase	3 (1%)	1 (0.5%)
hypotension	3 (1%)	1 (0.5%)
insomnia	3 (1%)	1 (0.5%)
rash	3 (1%)	1 (0.5%)
AV block second degree	2 (0.6%)	—

In addition, the following events were reported infrequently (less than 1%) or have been observed in angina trials. In many cases, the relation to drug is uncertain.

Cardiovascular: Angina, arrhythmia, bundle branch block, tachycardia, ventricular extrasystoles, congestive heart failure, syncope.
Nervous System: Amnesia, depression, gait abnormality, hallucinations, nervousness, paresthesia, personality change, tinnitus, tremor, abnormal dreams.
Gastrointestinal: Anorexia, diarrhea, dyspepsia, mild elevations of SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase, thirst.
Dermatological: Petechiae, pruritus, photosensitivity, urticaria.
Other: Amblyopia, CPK increase, dyspnea, epistaxis, eye irritation, hyperglycemia, sexual difficulties, nasal congestion, nocturia, osteoarthralgia, impotence, dry mouth.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. Definitive cause and effect relationship between these events and CARDIZEM therapy cannot yet be established.

Issued 1/89

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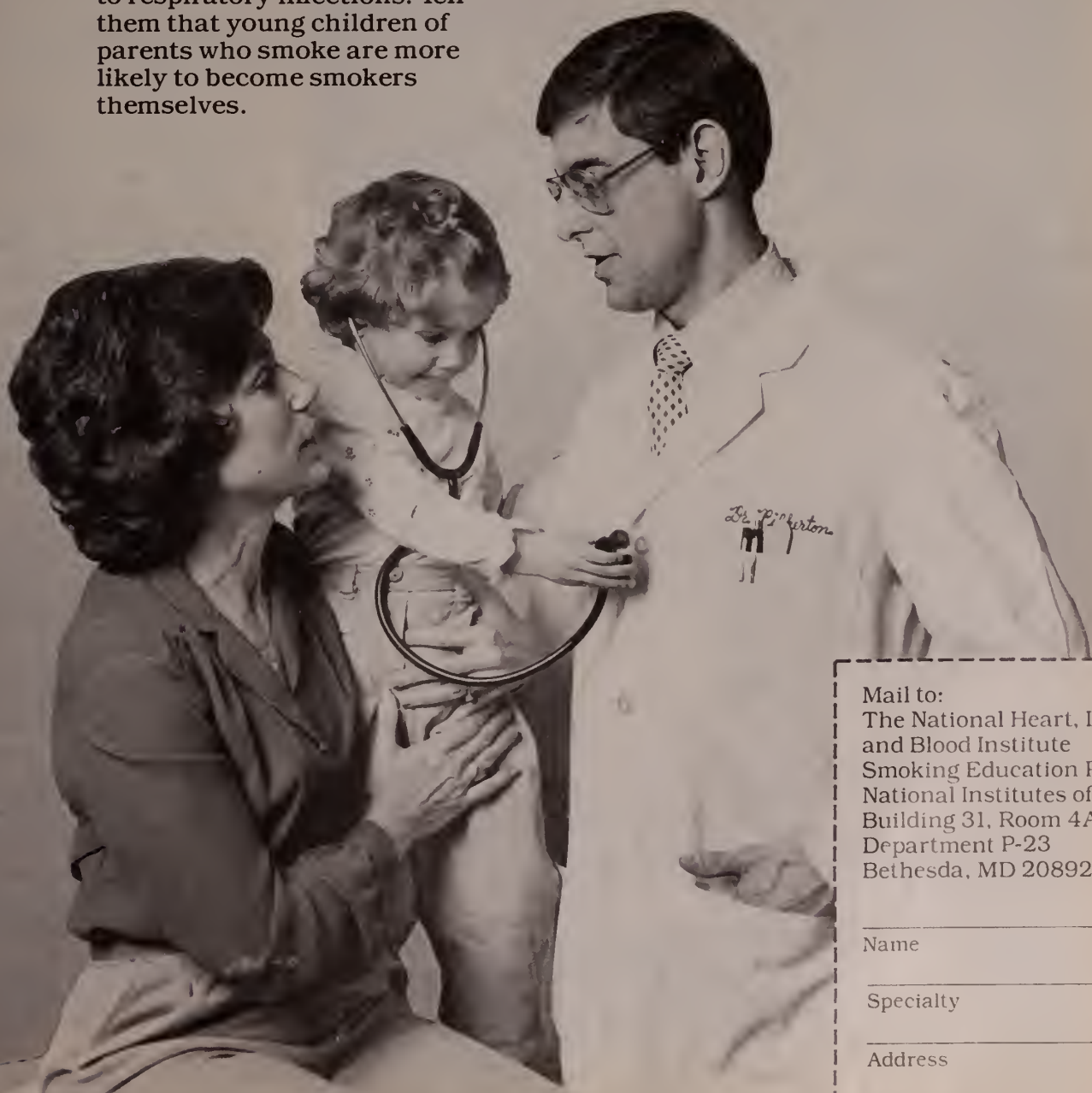
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Brief Summary

Consult the package literature for complete information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg b.i.d. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindications: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H₂-receptor antagonists.

Precautions: General — 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests — False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions — No interactions have been observed between Axid and theophylline, chlorazepate, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility — A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterocryptin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in female mice was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 350 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy — Teratogenic Effects — Pregnancy Category C — Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spinal bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers — Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use — Safety and effectiveness in children have not been established. Use in Elderly Patients — Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Dermatologic adverse events included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic — Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular — In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS — Rare cases of reversible mental confusion have been reported.

Endocrine — Clinical pharmacology studies and controlled clinical trials showed no evidence of antidiabetic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecostasia occurred.

Hematologic — Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H₂-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumentary — Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity — As with other H₂-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H₂-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other — Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms — There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

Treatment — To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the Physicians' Desk Reference (PDR). In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

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Additional information available to the profession on request.

ORIGINAL PAPERS

Alternative Approaches to the Management of Gravidas With Prolonged-Postterm-Postdate Pregnancies

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THE PROLONGATION OF PREGNANCY beyond 41 completed weeks of gestation is well known to be associated with increased perinatal morbidity and mortality. Affecting 5% to 10% of pregnancies, prolongation of gestation places the mother and fetus at increased risk for stillbirth, intrapartum fetal distress, meconium staining, macrosomia and cesarean delivery.¹⁻⁵

Most obstetricians consider that induction of labor is indicated if the cervical exam is favorable in any gravida who has completed her forty-first week (EDC + 14 days) and is beginning the forty-second week of gestation. Beyond the point of agreement, there is considerable controversy regarding the optimal management of prolonged pregnancy. One school of clinical practice maintains that all gestations which achieve 42 completed weeks of gestation should be delivered.⁶ The other major school of clinical practice recommends that prolonged

pregnancies can be followed safely for two additional weeks with careful and frequent fetoplacental assessments.⁷ A consensus is lacking, however, regarding the optimal form and frequency of fetal surveillance techniques as part of a program to reassure the obstetrician and parents of fetal well-being.

This limited, prospective investigation was undertaken recently (1) to compare in a randomized manner the two management strategies of continued, antepartum surveillance or routine labor induction, and delivery after 41 completed weeks of pregnancy and (2) to determine which strategy appears to be associated with better perinatal outcome and less maternal morbidity in our Mississippi patient population.

Patients and Methods

All gravidas attending the University Medical Center's Prenatal Clinic between July 1, 1987 and January 31, 1988, were considered for inclusion in this study. In order to be included, patients were required to have completed 41 weeks of gestation

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according to (a) reliable menstrual data; (b) documentation of uterine size at an early first-trimester examination; and/or (c) performance of obstetric ultrasound prior to 26 weeks' gestation that was compatible with available menstrual data. In order to be considered for the study, patients underwent brief ultrasound examination and fetal surveillance testing by combined sequential nonstress testing (NST) and nipple-stimulation contraction stress testing (CST). Cervical exams were also performed (see Figure 1). A diagnosis of oligohydramnios with less than a 1 cm pocket of amniotic fluid in any dimension, a nonreactive nonstress test or a positive contraction stress test automatically excluded a patient from the investigation and instead they were admitted for delivery. A cervical Bishop score of more than 5 eliminated the patient from consideration. If all study criteria were met, informed consent was obtained and patients were thereafter allocated into one of two study groups according to random assignment by sealed envelope.

Selection into the Active/DELIVERY group (Group D) resulted in admission of the study subject to the antepartum ward. There laminaria tent(s) were inserted with subsequent induction of labor, usually on the following morning. Oxytocin administration per standard UMC protocol was utilized with the sole adjustment being incremental changes in infusion rates at 20-30 minute intervals instead of the usually utilized 15 minute intervals. Prior to the initiation of oxytocin, laminaria tent(s) were removed and a careful cervical examination was performed and recorded. Fetal heart tones were monitored electronically throughout labor for any evidence of fetal distress.

Selection of the patient into the Conservative/Antenatal SURVEILLANCE group (Group S) resulted in antepartum monitoring on a weekly basis with ultrasound examinations performed to assess amniotic fluid volume and nonstress/contraction stress testing performed to assess fetal and placental well-being. Cervical examinations were performed at each weekly visit and patients were admitted for delivery in the presence of oligohydramnios by ultrasound examination or evidence of fetal distress by stress or nonstress testing. If delivery had not occurred by the end of the forty-third week of gestation, the patient was scheduled for delivery and the pregnancy terminated (see Figure 1).

All patients who were ineligible or refused participation in this investigation were recorded and managed like Group S as a conservative/surveillance group. Their results are analyzed separately.

The progress of labor was charted and the oc-

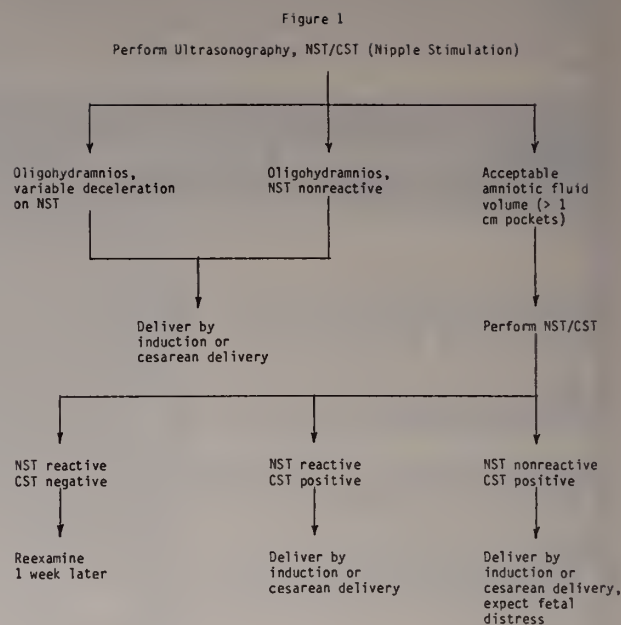


Figure 1. Perform Ultrasonography, NST/CST (Nipple Stimulation).

currence of any abnormalities was defined according to established criteria.⁶ Umbilical cord pH was obtained routinely for all gravidas at the time of delivery. The condition of the neonate at delivery was recorded and each neonate was carefully studied for evidence of any morbidity whatsoever.

All patients were primarily cared for by resident physicians of the University of Mississippi Medical Center, Department of Obstetrics and Gynecology, under the supervision of the attending staff. Prior to initiation of the study, approval was obtained from the Institutional Review Board of the University of Mississippi Medical Center. Informed consent was obtained from all patients prior to entry into the study.

Statistical analysis was by Student's *t* test for continuous variables and by chi-square analysis for noncontinuous variables. A *p* value of less than 0.05 was required for statistical significance.

Results

During the seven-month study period, 22 patients met the inclusion criteria and were randomly selected into one of the two treatment groups. Ten patients were randomized to the conservative/surveillance group (Group S) and 12 to the active/delivery group (Group D). Twenty-one additional patients presented with estimated gestational age \geq 42 weeks, but were excluded from the study pro-

tocol due to poor dating criteria or a finding of a Bishop score > 5 , oligohydramnios, or non-reassuring fetal heart rate testing at the initial screening evaluation (42 weeks). The extra group of 21 patients constituted Group X for evaluation and comparison with the two protocol groups.

Group S (Conservative/Surveillance). Ranging in age from 18 to 37 years, the 10 study subjects in Group S averaged 25.8 years with a mean gravidity of 1.6 and a mean parity of 0.40 (see Table 1). Gestational age averaged 42 weeks at the time of entry into the protocol (range $41\frac{3}{4}$ to $43\frac{3}{4}$ weeks). During the surveillance period, seven patients went into spontaneous labor before intervention was necessary. The other three gravidas required induction of labor, two when cervical examination revealed a Bishop score > 5 , and one when she failed to deliver by the end of the forty-third completed week of gestation. Seven patients had spontaneous vaginal deliveries, two had low outlet forceps deliveries, and one required low transverse cesarean delivery. The length of active labor (following the attainment of 4 cm of cervical dilatation) ranged from 4 to 16 hours with an average length of 8.3 hours. For the 10 patients there were three local anesthetics, three pudendals, two epidurals, and one

general anesthetic for cesarean delivery. Fetal weights ranged from 2840 to 4180 grams, with an average weight of 3472 grams. There were seven female infants and three male infants. The Apgar scores averaged 8.4 at one minute and 9.7 at five minutes. The hospital stay of Group S mothers ranged from 2 to 6 days with an average stay of 2.6 days. Two mothers underwent postpartum bilateral tubal ligation. One gravida suffered a retained placenta which required manual extraction. The patient who delivered abdominally required intravenous antibiotics (cesarean delivery after 12 hours of labor for cephalopelvic disproportion and late decelerations, with a cord pH of 7.23 and Apgars of 5/9). All neonates were assessed to be appropriate for gestational age. One baby required glucose monitoring for 24 hours. There were fetuses with meconium but no neonate had sequelae.

Group D (Active/Delivery). The 12 gravidas in this group ranged in age between 17 and 34 years with an average maternal age of 23.3 years. The average gravidity equaled 2.08 and the average parity equaled 0.58. Gestational ages ranged from $41\frac{3}{4}$ to $43\frac{3}{4}$ weeks at entry into the protocol, with an average age of 42 weeks. Following cervical ripening and oxytocin induction, 10 gravidas delivered

TABLE 1

	<i>Group S — Surveillance</i>	<i>Group D — Induction</i>	<i>Group X — Exclusion</i>
Age Range/Avg	18-37/Avg 25.8	17-34/Avg 23.3	18-37/Avg 22.2
Gravidity/Parity	2.08/0.58	1.8/0.76	1.8/0.76
Type Delivery	7 SVD, 2 LOF, 1 LTCS	7 SVD, 3 LOF, 1 LGCS, 2 LVCS	14 SVD, 3 LOF, 4 LTCS
Length Labor	4-16 hr/Avg 8.3 hr	4-15 hr/Avg 6.33 hr	0-24 hr/Avg 8 hr
Anesthesia	3 local, 3 pud, 2 epid, 1 gen	5 local, 1 spinal, 3 epid, 2 gen	10 local, 4 pud, 1 spinal, 2 epid, 4 gen
Birth Weight	2840-4180 g/Avg 3472 g	2780-4110 g/Avg 3560 g	2940-5200 g/Avg 3695 g
Apgar	8.4/9.7	8.08/9.75	8.85/9.7
Hospital Stay	2-6 days/Avg 2.6 days	2-5 days/Avg 3.41 days	2-7 days/Avg 3.04 days
Bilateral Tubal Ligation	2	4	6
Morbidity	1 retained placenta, 1 postop ATB	1 episiotomy abscess 1 delayed PIH/UTI 2 postop AT	LOF anemia transfuse 2 4° ext, 1 with atony ATB/PIH/ATB post c/s 1 postop transfusion/ATB 1 postop c/s endometritis
Neonatal Course	All AGA, 1 glucose monitor	10 AGA, 2 LGA, 1 bil hydrocele, 1 hyperbili, 1 brief oxyhood ATB	19 AGA, 2 LGA, 1 hyperbili photo tx
Meconium	3	1	5

vaginally (10 of 12 or 83%), seven spontaneously and three by low outlet forceps. Two others underwent abdominal delivery (2 of 12 or 17%), one by low segment transverse cesarean birth and one by low segment vertical cesarean delivery. One patient underwent spontaneous labor in association with the insertion of the laminaria tests and required no oxytocin. All patients were delivered during the first day of labor induction except for three gravidas, one requiring three days of induction and two requiring two-day inductions. The length of active phase labor ranged from 4 to 15 hours with an average labor length of 6.33 hours. There were five local anesthetics utilized as well as one spinal, three epidurals, and two general anesthetics. Fetal weight ranged from 2780 to 4110 grams with an average birth weight of 3560 grams. There were seven female infants and five male infants. The average Apgar scores were 8.08 at one minute and 9.75 at five minutes. Hospital stay ranged from 2 to 5 days with an average stay of 3.41 days. Three patients had bilateral tubal ligation, two postpartum and one at the time of abdominal delivery. One gravida suffered an episiotomy abscess two weeks' postpartum, one case had delayed pregnancy-induced hypertension one week out, and both mothers who underwent cesarean delivery received IV antibiotics. Two babies were LGA and the remainder were AGA. One infant who was delivered abdominally had Apgars of $\frac{7}{8}$ with a cord pH of 7.11 and required brief oxyhood and antibiotics (3600 gram female). Another AGA baby had hyperbilirubinemia which required no phototherapy. There was only one case of meconium noted at delivery and there were no sequelae.

Group X (Exclusion Group). This group of 21 gravidas had an average maternal age of 22.2 years (range 18 to 37 years). The average gravidity equaled 1.8 and the average parity equaled 0.76. Gestational ages by best criteria ranged from 41 $\frac{5}{7}$ to 44 weeks with an average estimated gestational age of 42 $\frac{3}{7}$ weeks. Sixteen of the 21 patients in this group (76%) were excluded from protocol participation based solely upon cervical examination with a Bishop score >5 . Two patients were excluded due to poor gestational dating. One patient had a breech fetus with a previous failed version. One patient had a nonreactive NST excluding her from the protocol. There was also one patient with oligohydramnios on initial ultrasound evaluation who was excluded.

Ten gravidas in Group X developed spontaneous labor within one week of initial evaluation and exclusion for this investigation. The breech fetus was delivered by elective cesarean delivery. Pregnancies

associated with a nonreactive NST and oligohydramnios were admitted to the labor and delivery unit for induction of labor on the day of evaluation. Seven others were admitted for labor induction within two days secondary to a favorable cervical exam. One gravida who was followed with NST/OCT and sonograms was admitted 10 days after initial evaluation for induction. Four of the gravidas in this group were estimated to be at 44 weeks and had favorable cervical exams. The other gravidas who underwent elective inductions all had Bishop scores ≤ 7 . There were 14 spontaneous vaginal deliveries and three gravidas were assisted with low outlet forceps. The other four gravidas were delivered abdominally by low segment transverse cesarean delivery for a breech presentation and three instances of cephalopelvic disproportion (one failed forceps). The length of labor ranged from 0 to 24 hours with an average active labor length of 8 hours. Two epidurals, four pudendals, four general anesthetics, one spinal, and 10 local anesthetics were administered.

Birth weights of Group X fetuses ranged from 2940 to 5200 grams with an average weight of 3695 grams. The average Apgar scores equaled 8.85 at one minute and 9.7 at five minutes. The patient with failed low outlet forceps and a subsequent cesarean delivery had a 3560 gram female with Apgars of $\frac{8}{9}$ and a cord pH of 7.17. The mother had preeclampsia and the infant was AGA requiring phototherapy for hyperbilirubinemia. Maternal hospital stay in this group ranged from 2 to 7 days with an average stay of 3.04 days. Six patients had immediate postpartum bilateral tubal ligation. Two mothers required postpartal blood transfusions for anemia, one after spontaneous vaginal delivery and the other following abdominal delivery. Three of the patients undergoing cesarean birth had labored previously and had received antibiotics, one for clinical endometritis. Two patients had fourth degree extensions of their episiotomies, one after low outlet forceps with uterine atony requiring IV antibiotics, and the other after a spontaneous vaginal delivery. The second patient had postpartum atony following a spontaneous vaginal delivery. Two of these 21 infants were LGA and the rest were AGA. There were four fetuses delivered with meconium staining but none suffered meconium aspiration.

All Three Groups. There was no statistical difference in the types of delivery among the three small groups. Vaginal delivery was effected in all but seven cases. There were no statistically significant differences among the groups in regard to length of labor and mode of delivery. The average birth

weights in each group were not significantly different, nor were the average Apgar scores. The average hospital stay was longest in Group D (3.41 days), but no statistical significance was present. In no group was there a case of significant maternal morbidity. Ten percent of the surveillance group (Group S) required IV antibiotics while 25% of the delivery group (Group D) required antibiotics versus 19% for Group X subjects. The only two patients to require transfusion were Group X gravidas. There was one case of pregnancy-induced hypertension in Groups D and X and one case of postoperative endometritis in Group X. There was one case of retained placenta in Group S and two cases of uterine atony in Group X. Thirty percent of the Group S gravidas had meconium in comparison to 8% of Group D and 23% of Group X. Sixteen percent of the neonates in Group D were LGA versus 9% in Group X and 0% in Group S. There were no cases of significant neonatal morbidity in any group and no neonatal deaths. All neonates went to the term nursery.

Discussion

The term "postdate pregnancy" describes a gestation with a duration that has exceeded 41 completed weeks of gestation from the onset of the last menstrual period (LMP + 294 days, EDC + 14 days). Because such a definition includes gravidas with uncertain dates, the term "prolonged pregnancy" or postdate pregnancy is utilized to describe pregnancies in patients which are well-documented to have exceeded 294 days. There is an important distinction between postdates/prolonged pregnancies and those associated with postmaturity. The term "postmaturity" should be used to describe the condition of the fetus/newborn that is comparable to dysmaturity in the preterm neonate. In other words, it is a term synonymous with the occurrence of intrauterine fetal growth retardation and wasting in a prolonged gestation. Less than 20% of babies in prolonged pregnancies develop postmaturity syndrome, but these fetuses are at increased risk for perinatal morbidity and mortality.^{1,2} Obviously, prenatal detection of these compromised fetuses is important because delay of delivery would be ill-advised.

The incidence of postdate pregnancy (prolonged plus not truly prolonged) is variably reported to be between 3.5% and 12%.^{2,8} About one-quarter of postdate pregnancies will complete 43 weeks (1% to 4% of all gestations). Since this problem is so common, there has been much written about the etiology, diagnosis and management of this obstet-

ric dilemma. As with some other obstetric problems, a common management protocol acceptable to all has not been defined.

Prolonged pregnancy has both a maternal and fetal impact. The mother may be adversely affected by the increased likelihood of cesarean delivery, greater financial strain secondary to increased costs from her closely supervised peripartal care as well as the well-known emotional stress of being "overdue." On the other hand, the fetus is at risk for peripartal distress from a variety of factors associated with prolonged gestation.³⁻⁵

When pregnancy-dating criteria are excellent, some authorities advocate routine induction of labor at the end of the forty-first week of gestation (EDC + 14 days), while other practitioners advocate continued antepartum surveillance with labor induction by 43 completed weeks' gestation if delivery has not occurred by that time. In a prospective study of 2,000 patients with prolonged gestations, Gibbs reported no improvement or difference in perinatal outcome between those patients routinely induced over those allowed to labor spontaneously.⁷ These investigators concluded that there appears to be no justification for routine induction for uncomplicated prolonged pregnancy. However, DeVaul and Scholl presented data suggesting that "fetal jeopardy increases subtly but progressively" from the forty-first week onward.⁶ Therefore, they advocate active intervention in the form of induction if there is no spontaneous labor by the end of the forty-first week. These two investigators represent just two examples of the many published studies of prolonged pregnancy. They also illustrate the divergence of findings and opinions which complicates the development of a well-accepted, common protocol for the optimal management of this very important perinatal problem.⁹

A potential cause of prolonged pregnancy is the problem of inaccurate gestational dating. Ovulation data have suggested that a number of pregnancies that are postterm by menstrual dates are not truly prolonged pregnancies. This may explain why different incidences for this pregnancy complication are reported.¹⁰ Literature reports contain a number of differences in the incidence of postdate pregnancy with respect to parity, maternal age and race.

Postdate pregnancy has a considerable impact upon perinatal mortality. Prior to the utilization of antepartum testing, the incidence of stillbirth was high.³⁻⁵ A significant portion of perinatal mortality is associated with congenital malformations; these are increased by 50% in postterm gestations. Perinatal morbidity likewise is increased in these preg-

nancies with a higher incidence of cesarean birth, failed progress during labor, greater numbers of macrosomic infants with their attendant problems, a higher incidence of intrapartum fetal distress, and greater maternal morbidity associated with increased cesarean delivery frequency.

A diagnosis of prolonged pregnancy requires the accurate determination of gestational age. This can only be done early in gestation. A known last menstrual period is the best clinical predictor of dates of confinement.¹¹ Because physical examination data is often difficult to obtain, the patient may not remember historic data, and other information such as basal body temperature data or other ovulatory history are often missing, an early ultrasound determination of gestational age has become the so-called gold standard of backing up history and physical examination information. The best prediction by ultrasound is obtained before 28 weeks with a range of variation of ± 1.5 to 2 weeks while the fetal skeletal system is rapidly growing.

Appropriate antepartum surveillance for prolonged pregnancies must be provided. The goal of this testing is to identify the fetus who would benefit from delivery (such as the fetus with postmaturity syndrome) and may be suffering from intrauterine fetal distress. Testing usually begins no later than the start of the forty-second week of missed menses and must be continued once or twice weekly. The most widely used method of testing is the nonstress test while contraction stress testing is considered to be optimal by other groups of investigators.^{12, 13} Recently, ultrasonic determination of amniotic fluid volume has been added to the diagnostic armamentarium for better detection of those babies at greatest risk for fetal distress.^{5, 14-17}

Although all agree that the patient with a prolonged gestation who has a ripe cervix should be induced, there is no consensus regarding the management of a patient with a prolonged gestation and an unripe cervix.¹⁸ Although routine induction of labor at 42 weeks has been recommended by many authors, the opponents to this practice have pointed out that several studies have not shown a substantial improvement in perinatal outcome where this was done.^{2, 19} Unnecessarily increased morbidity may be incurred in these postdate patients with delayed ovulation/false prolonged pregnancies because the majority of fetuses in prolonged gestations are not compromised, because most inductions are not successful due to unripe cervical conditions and because fetal distress may be incurred more easily due to a prolonged induction of labor which is often needed in an unripe cervical situation.

There is a consensus that the postdate fetus is clearly at higher risk to develop fetal distress in labor and therefore should be monitored closely from the onset of labor until delivery.³ We feel that this is best done with internal electronic fetal heart rate monitoring via fetal scalp electrode. The proper management of meconium at the time of delivery with DeLee suction is important because of its increased incidence in these fetuses and because these infants have a higher or greater chance of fetal distress and low Apgar scores in association with meconium passage. Avoidance of midpelvic vaginal delivery is recommended when macrosomia is suspected.²⁰

The primary goal of this prospective investigation was to determine which management scheme in our patient population was associated with the better maternal and perinatal outcome. During the short study interval of seven months, recruitment of patients was difficult due to stringent inclusion criteria. Twenty-one gravidas were excluded from the study (Group X) and only 22 met inclusion criteria (Groups D and S). Sixteen of the 21 in the exclusion group were excluded due to a favorable cervical exam and two had poor dating criteria. One patient was excluded for a nonreactive NST and one excluded for oligohydramnios. Also, one patient was breech with a failed version. All neonates of the Group X-excluded gravidas went to the term nursery.

A substantial number of patients who are referred to UMC for obstetric care late in gestation have poor gestational dating. Hence, a more pertinent concern for our obstetric environment is the optimal management of the suspected, possible postdate pregnancy. Currently we utilize a course of management for these patients identical to that applied to Group S participants in this investigation.

The ability to draw firm conclusions from this investigation is hampered due to the small number of participants in each study group. However, our results from these limited studies suggest that neither course of management appears to have distinct advantages or disadvantages. We were unable to derive accurate data related to hospital care costs for the gravidas in these two groups, although other investigators have reported that health care costs with an expectant course of management can exceed an active, induction type of management approach.²¹

Although the numbers are small, this study suggests that there is no difference in the maternal or neonatal outcome, regardless of the postdates management strategy employed, as long as one follows

the accepted assessment protocols as described. There does not seem to be any reason to anticipate an increased incidence of operative delivery with a course of routine induction (Group D) or to anticipate an increased incidence of fetal distress or neonatal morbidity with a course of conservative (Group S) surveillance. ★★★

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Acknowledgement

Supported in part by the Vicksburg Hospital Medical Foundation

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Rural Health Research Program — The University of Mississippi

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ONE OF THE STRENGTHS of the American health care system has been the ongoing dialog between clinicians and researchers. This dialog has been actively supported through agencies such as the National Institutes of Health as well as numerous private foundations. Research findings are routinely adopted into clinical practice and communication channels exist for defining the needs of clinicians to research organizations.

However, despite the successes of this partnership, one sector of the health care system has traditionally been underrepresented in terms of research efforts. This sector is health care and health care research in rural areas, particularly the rural South.

The Rural Health Research Program (RHRP) of the Research Institute of Pharmaceutical Sciences of the University of Mississippi was recently designated by the State of Mississippi as a program to correct this underrepresentation of rural areas and to conduct a wide range of health related research in, and ultimately for, rural Mississippi.

RHRP represents the culmination of over twenty years of ongoing health and social research in central Mississippi. It also represents a uniquely successful experiment in community-based research and a firm commitment by the state and the University of Mississippi to understand and address the problems of all its rural people. To understand the organization of RHRP and its place in the local community it is necessary to understand its history and organizational antecedents.

The Rural Health Research Program (RHRP) of the Research Institute of Pharmaceutical Sciences of the University of Mississippi has been designated by the State of Mississippi as a program mandated to conduct health research throughout rural Mississippi. The authors discuss the historical development of RHRP and describes its present capability for fulfilling this research mandate. They describe the opportunities presented by RHRP for collaborative research with other health care professionals interested in health care problems and solutions in rural Mississippi.

Health Research in Central Mississippi

Organized health research in rural, central Mississippi began in 1969 with a bio-social assessment of the black community; this was funded by the Center for Health Services Research of the Public Health Service. This assessment would have been relatively unremarkable compared to similarly funded programs around the world except that it was grounded in a philosophy of community involvement and feedback to a degree that is rare in health research. Ending in 1975, the Holmes County Health Research Project achieved several notable results. First among these was a health care needs assessment. The second important result was a recognition that any effort to supplement the medical care delivery system must rely on community members as the primary agents of implementing behavioral change and conducting health education.

Among the results of the health care needs assessment was the documentation of prevalence rates

From the Rural Health Research Program of the Research Institute of Pharmaceutical Sciences, the University of Mississippi.

of essential hypertension that were found to be among the highest in the world. Coinciding with this documentation of a high prevalence of hypertension was the research of Dr. Dennis A. Frate on the relationship between familial social cohesion and hypertension. Dr. Frate had been investigating the relationship between social and cultural factors and health in the community since 1971. In the course of an ethnographic survey of the area, Frate discovered that blood pressures were significantly related to the type of extended family an individual interacted with. Differences in blood pressures between a highly cohesive extended family and a less cohesive extended family were marked.

The recognition of these three factors: 1) the high prevalence rates of essential hypertension; 2) the strong association between social and family organization and blood pressure, and; 3) the need for community involvement in the treatment and control of health problems, led to the development of a research application by Dr. Frate, of a project entitled "Community Control of Hypertension in Mississippi (CCH)." This five year project was funded by the National Heart, Lung and Blood Institute of the National Institutes of Health in 1980 for \$2.46 million.

CCH was unique for four reasons:

1. CCH was funded under the sponsorship of a Community Action Program, Central Mississippi, Inc.

Formally chartered on August 25, 1965, Central Mississippi, Inc. (CMI) was an outgrowth of the War on Poverty in the mid-1960's, launched to attack problems encountered by all poor people throughout the country. Locally, a broad-based organization was needed to address the numerous ills encountered in this rural area by both races. From 1965 to 1980 the organization expanded and altered its scope to include service projects such as aging programs, crisis intervention, weatherization of homes, and Headstart. The administration of these programs was handled by individual directors for each program, an executive director, and a broadly-based governing board. The board was composed of 36 members representing all segments of the local population. In fact, as stated in the bylaws, one-third of the board had to represent low-income residents, one-third the private sector, and one-third the public sector.

As was the case with the Milton Olive III Foundation, the original grantee institution of the Holmes County Health Research Project, the sponsorship by CMI institutionalized community input, assuring

that community representatives would be involved in all aspects of the project. This institutionalization was carried further by using community employees of local organizations such as the local County Extension Office, mental health system and other sectors of CMI as both paid and in-kind consultants.

2. All intervention and education was performed by locally recruited and trained paraprofessionals and/or volunteers.

The key role in the conduct of CCH was that of a Health Counselor. Two separate counselor models were devised. One, more sophisticated model, was titled, "Hypertension Health Counselor." These individuals were recruited from within the community and hired as full-time paraprofessionals. The selection of individuals to be trained as Hypertension Health Counselors was based on four criteria: 1) life-long or long-term residence in the area; 2) knowledge of and activity in a variety of social networks and institutions in the area; 3) an assertive, yet sensitive, personality which is required to perform the management and/or behavior modification functions of the role; and, 4) a proven ability to communicate with all types of community residents, rich and poor, black and white, medical providers as well as consumers. The 350 applications received for the five Hypertension Health Counselor positions confirmed our belief that our Hypertension Health Counselors are exceptional individuals. As these individuals were not previously trained in any health related profession, they received an initial, intensive 120 hour curriculum oriented toward high blood pressure detection, control, and prevention. Additionally, their knowledge of the community, familiarity with the residents, and their insights into social structure and behavioral processes of the area made them an indispensable part of the project.

3. CCH consisted of a three-way partnership of locally based researchers, outside expert consultants, and local practicing physicians.

The involvement of local physicians was facilitated by obtaining the services of Dr. Sidney A. Johnson, a Goodman, Mississippi, general practitioner. Dr. Johnson has been intensively involved with the CCH project since its inception and now serves as Clinical Director of RHRP, while maintaining his private practice. At present, all physicians in the immediate area, as well as the main local hospital, are actively involved in some aspect of our wide range of health research.

4. CCH provided a model for conducting health research in rural areas, which has proven applicable to a wide range of research topics.

CCH has proven highly successful both in achiev-

ing its research objectives and controlling the blood pressures of local people. More than 15 professional publications and 30 scientific presentations have resulted from the research conducted by the program. Additionally, subjects of all our high blood pressure intervention models were able to achieve control rates averaging greater than 80 percent.

Perhaps the most important outgrowth of the CCH project is the lessons learned about conducting long-term health related research in this poor, rural, medically underserved, biracial community. First among these lessons is the feasibility and necessity of using local people to perform demonstration and education research, clinical trials, and basic research. Outside researchers have occasionally expressed skepticism about the ability of non-degreed paraprofessionals to perform tasks normally undertaken by clinical psychologists, nurses, or registered dietitians. Our experience has shown that the cultural sensitivity and knowledge of the community gained by life-long residence in the area is more important for the successful conduct of a study than formal credentials. This is not to say that the field staff used by the program are in any way naive or untrained. As stated earlier, at the beginning of the CCH project, the field staff received over 120 hours of intensive training on the epidemiology and treatment of hypertension, interview techniques, and methods of effecting the prescribed behavioral change. Since this initial training, their skills have been continually updated by inservice sessions conducted by local professional staff as well as professionals brought in from the outside.

Another important factor in the success of RHRP is the fact that all full-time staff, professional and paraprofessional, live in the project area. For conducting health research in a rural area that fact has proven to be a considerable advantage. Health research projects, which are based at medical centers or university campuses and make only periodic excursions into rural areas for research purposes, are perceived as having less personal investment in the local area than researchers who have the vested interests of the residents. RHRP is accessible to the community as we literally have to live with the outcomes of our research. Also, particularly among a poor, minority population in central Mississippi, large, external organizations are often viewed as self-serving if not exploitive. Through its longevity and stability RHRP has avoided these labels and suspicions.

This model of on-site, community-based research by resident staff has allowed the conduct of a wide range of studies beyond the original CCH project.

These include:

1. Community Control of Hypertension;
2. Genetic Markers and High Pressure;
3. 10 Year Follow-Up of Blood Pressure in Adolescents;
4. Tracking of Anti-Hypertensive Medications;
5. Nutritional Implications of Geophagy;
6. The Role of Dietary Sodium and Potassium in Blood Pressure;
7. INTERSALT, The Relationship of Urinary Electrolytes to Blood Pressure (Funded, NIH);
8. The Relationship Between Ponderal Indices and Blood Pressure;
9. Black and White Familial Networks as Expressed in Family Reunions (Video Tapes, Funded, Miami University);
10. Collaboration with University of Nebraska — Factors Related to Black Teenage Pregnancy;
11. Trials of Hypertension Prevention — Clinical Trial (Funded, NIH);
12. Health Care-Seeking Behavior Among Blacks with Coronary Heart Disease (Funded, NIH);
13. Minority Investigator Award (Funded, NIH);
14. Biomedical Research Support Grant (Funded, NIH);
15. Cancer Prevention through Dietary Intervention (Proposed);
16. Hypertension Risk Reduction in Children (Proposed);
17. Smoking Cessation in a Rural, Black Population (Proposed), and;
18. Relationship of Dietary Fat and Cancer of the Prostate (Proposed).

The expansion of RHRP from a single externally funded study led to a number of organizational changes for the program. The most important among these was changing the granteeship from Central Mississippi Inc. to the University of Mississippi. This change was done for a number of reasons. As multiple sources of funding were explored and multiple studies were undertaken, the resources of Central Mississippi Inc. were severely strained in the performance of an activity (research) which was not part of their original service mandate. Also, broader research goals increased the need for easier access to resources such as libraries, mainframe computers, and Institutional Review Boards; such resources only a university could provide. This shift, however, did not change the community focus of the program. Staff and offices are still located in Goodman, Mississippi, 110 miles from the main campus of the University of Mississippi. RHRP became, in essence a branch campus of the University.

The second major organizational shift for RHRP occurred in February 1987, when the program was designated as a Program Area within the Research Institute of Pharmaceutical Sciences of the University of Mississippi, and was recognized and commended by the state legislature as an organization charged with conducting health research in rural areas throughout Mississippi. This recognition had the practical consequence of providing the program with an infusion of state monies allowing the program to more directly address the needs of the state and its people, rather than having the direction of research completely controlled by funding opportunities from external sources.

Recruitment of Participants

One of the strengths of RHRP has been its ability to recruit and retain participants for its research activities. This ability has been enhanced by three factors:

1) Prescreening of participants by means of a series of 5 percent random population surveys of health risks. Prescreening allows staff to devote their time to recruiting participants that are highly likely to be appropriately classified on the criteria of a large number of health risk and demographic factors. This allows the luxury of recruitment through face to face contact, making the best possible use of our indigenous interviewers and allowing us to make a complete and detailed explanation of the implications and requirements of our research.

2) Recruitment is informed by prior basic social research. From 1971 until the present health oriented research has been supplemented by social research. Social research has provided us an enhanced understanding of the needs of the community and its social organization which has allowed us to structure research locally acceptable and beneficial.

3) All research activities contain a service component for the community. This service component assures continued cooperation with the community and, along with our on-site location, helps gain the community's trust and understanding.

These methods of recruitment have led to cooperation rates of 99 percent for basic surveys, 100 percent for self-help group organization, 85 percent for clinical trials, which has included aversive procedures such as venapuncture and 24-hour urine collection, and 80 percent for longitudinal studies. These high rates of cooperation coupled with extensive survey data make the new research efforts efficient, cost effective, and highly likely to succeed. RHRP success has led to faculty participation in two national workshops addressing the problems

on recruitment for clinical studies; our model was adopted by both workshops as the most effective.

As the role of RHRP expands we seek to continue our dialogue with the Mississippi medical care community. The practicing physician and other health care professionals are the best sources of information about research needs, opportunities, and strategies. We at RHRP invite communication, cooperation, and collaboration with those who share our interests and commitment. The program exists to investigate the health problems of rural Mississippians. The on-site faculty have a wide range of expertise. However, we invite the involvement of professionals external to us who have definite research interests on rural health problems. ★★

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The device consists of three pieces of laminated plywood, 4" square, that are glued or stapled together. The middle piece of plywood is left intact. The piece of plywood that will be used to press against the appliance has a 2 1/4" diameter hole removed from the center; and the piece of plywood that will be the furthest from the body has a 1" diameter hole removed from the center. This 1"

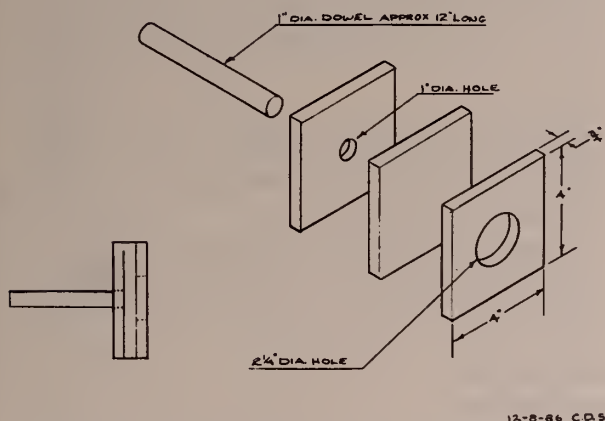


Figure 1. A diagrammatic representation of the pieces needed to fit together for manufacture of the tool.

The authors are engaged in the private practice of urological surgery in Tupelo.



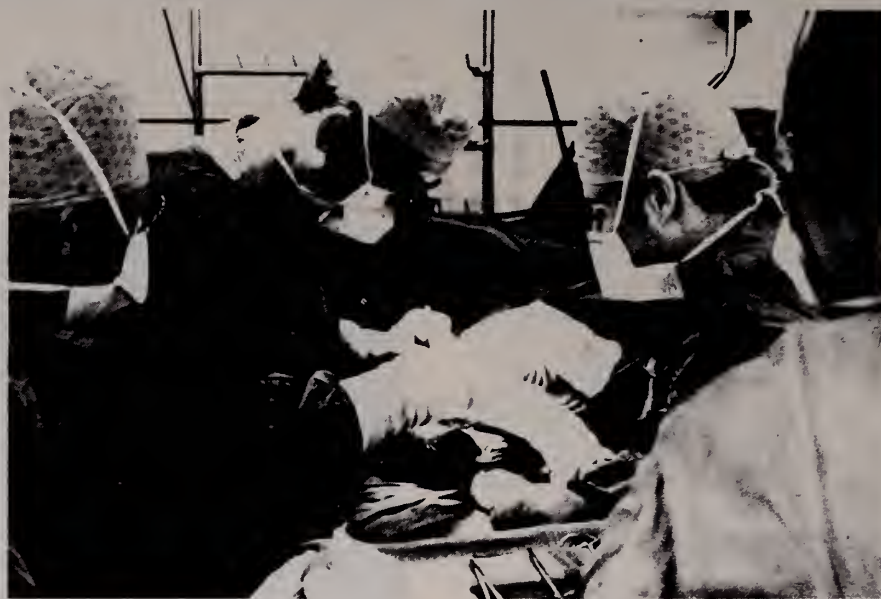
Figure 2. Demonstrates the position of the tool against the door or wall, when applied to the body.

diameter will accept a 1" diameter dowel or plastic pipe. The plastic pipe is placed against the wall and into the 1" socket created by the hole in the plywood. This creates an even pressure that is transmitted through the surface of the plywood, so that the ileostomy device is better and more evenly sealed around the periphery of the ileal loop as it exits the body. It will enable the patient to better care for the ileostomy device alone, while keeping both hands free.

Figure 1 is a diagrammatic representation of the pieces needed to fit together for the rather simple manufacture of the tool. Figure 2 is a photograph of a person demonstrating the position of the tool against the door or wall, when applied to the body. Further information may be obtained from Mr. Carl D. Swofford, Route 3, New Albany, Mississippi, 38652.

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Medicaid Today

MEDICAID IS DOING TOO LITTLE for too few of America's poor. But who are those who are left out?

Just over half are employees and their dependents. A young mother who does not qualify for public assistance because she works for minimum wage at a fast-food store could be left out, as could a family with a handicapped child whose expenses consume the breadwinner's paycheck. The seasonal factory worker may be excluded in some states if his family is "intact" — that is, if the family has two parents living at home and therefore is ineligible for AFDC. Single persons and childless couples are excluded from many states' Medicaid programs, no matter how poor these individuals may be.

A closer look at Medicaid today, from eligibility requirements to benefits and services to financial management, reveals how it fails these Americans.

Eligibility and Enrollment

Eligibility for Medicaid is defined by a complex set of guidelines specifying groups of people for whom coverage is mandatory and groups of people for whom coverage is optional.

Mandatory Groups

Table 1 lists those categories of persons for whom eligibility is "mandatory" under the Medicaid program and illustrates how closely eligibility for Medicaid is linked to eligibility for public assistance. These rules for defining public assistance eligibility vary greatly from state to state. For example, in 1986, a family of three living in Alabama would have to earn less than \$1,416 per year to qualify for AFDC and, therefore, Medicaid. The same family living in Utah could earn as much as \$8,316 and obtain Medicaid assistance.¹

The Health Policy Agenda for the American People (HPA) is a coalition of 172 public and private sector organizations committed to improving the nation's health care system. Expansion of Medicaid was identified by the HPA as one of the nation's most urgent health care issues. The Ad Hoc Committee on Medicaid has made recommendations for eight major reforms to increase the effectiveness of the program. This article is taken from "Including the Poor," a publication describing the committee's finding. Copies of the complete report are available from the MSMA office.

As of 1988, the average income threshold for AFDC eligibility was \$4,792 per year for a family of three — only 49 percent of the federal poverty level of \$9,690 in annual income for a family of three. Thirty-two states, as well as the three territories, set the maximum income for qualifying for public cash assistance at less than half of the federal poverty level.¹ In Figure 1, the graph shows over time the gap between the number of Americans in poverty and those covered by Medicaid; the second table summarizes state-set eligibility levels for Medicaid as a percentage of poverty (see Table 2).

Not only is the maximum income level well below the poverty line in most states, but these income levels are not automatically adjusted upward from year to year. Thus, as costs and inflation continue to rise, applicants have to be relatively poorer to qualify for public assistance and Medicaid.

Federal law also requires states to impose an "assets test" on applicants to determine eligibility for public assistance. If a public assistance/Medicaid applicant's assets or personal possessions, excluding a home or a car worth less than \$1,500, are

Reprinted from "Including the Poor," published by the Ad Hoc Committee on Medicaid/The Health Policy Agenda for the American People.

valued above set dollar levels, he or she may be considered ineligible for public assistance, regardless of actual income. In some states, the assets test may be extended to members of the applicant's immediate family.

Extending Coverage and Simplifying Eligibility

Federal rules do require state Medicaid programs to cover a few persons who do not strictly qualify in terms of income or family circumstances. For instance, states must provide coverage by 1990 for

TABLE 1
MANDATORY COVERAGE GROUPS FOR
STATE MEDICAID PROGRAMS, 1988

1. Recipients of AFDC
2. Certain pregnant women and children not eligible for AFDC
3. Working families losing AFDC due to employment or increased earnings
4. "Deemed" recipients of AFDC — e.g., those qualifying for AFDC but eligible to receive less than \$10 per month
5. The aged, blind and disabled covered under SSI
6. Individuals receiving mandatory state supplements to SSI
7. Individuals ineligible for AFDC or SSI because of requirements inapplicable under Medicaid

pregnant women and their infants if their incomes are below the federal poverty line, and for some children of two-parent families who meet Medicaid's income requirements but would otherwise be ineligible because both parents are at home.

Another way the federal government has attempted to facilitate access to health care is to allow state programs to use a "presumptive eligibility" standard, meaning that health care providers are allowed to presume an applicant is eligible. These patients can receive treatment immediately, rather than having to wait weeks or longer for paperwork to officially verify their eligibility.

Optional Groups

The federal government also identifies a number of "optional" groups a state may consider for coverage. The purpose of specifying these is to encourage states to extend Medicaid coverage to poor persons not otherwise meeting the categorical eligibility requirements.

Thirty-five states and the District of Columbia include, in some way, "Medically Needy" persons in Medicaid. These are individuals or families with family incomes exceeding the Medicaid eligibility

TABLE 2
AFDC AND MEDICAID ELIGIBILITY THRESHOLDS AND INCOME LEVELS, 1988

<i>State</i>	<i>Income</i>	<i>% of Poverty</i>	<i>State</i>	<i>Income</i>	<i>% of Poverty</i>
Alabama	\$1,416	14.6	Montana	\$4,308	44.5
Alaska	9,348	77.2	Nebraska	4,368	45.1
Arizona	3,516	36.3	Nevada	3,960	40.9
Arkansas	2,448	25.3	New Hampshire	5,952	61.4
California	7,956	82.1	New Jersey	5,088	52.5
Colorado	5,052	52.1	New Mexico	3,168	32.7
Connecticut	6,408	66.1	New York	6,468	66.7
Deleware	3,828	39.5	North Carolina	3,192	32.9
Dist. of Columbia	4,548	46.9	North Dakota	4,452	45.9
Florida	3,300	34.1	Ohio	3,708	38.3
Georgia	4,512	46.6	Oklahoma	5,652	58.3
Hawaii	6,684	59.9	Oregon	5,040	52.0
Idaho	3,648	37.6	Pennsylvania	4,608	47.6
Illinois	4,104	42.4	Rhode Island	6,204	64.0
Indiana	3,456	35.7	South Carolina	4,836	49.9
Iowa	4,728	48.8	South Dakota	4,392	45.3
Kansas	4,812	49.7	Tennessee	4,380	45.2
Kentucky	2,616	27.0	Texas	2,208	22.8
Louisiana	2,280	23.5	Utah	8,316	85.8
Maine	6,876	71.0	Vermont	7,548	77.9
Maryland	4,524	46.7	Virginia	3,492	36.0
Massachusetts	6,600	68.1	Washington	5,904	60.9
Michigan	6,864	70.8	West Virginia	2,988	30.8
Minnesota	6,384	65.9	Wisconsin	6,204	64.0
Mississippi	4,416	45.6	Wyoming	4,320	44.6
Missouri	3,384	34.9	Average State	\$4,792	48.9

Source: National Governors' Association, July, 1988.

limit, but also having sufficiently high medical expenses so that remaining income, net of these medical expenses, falls below the eligibility level. The states' income thresholds for defining such groups may be as much as one-third higher than those used to establish Medicaid eligibility by means of the AFDC link.²

Other definitions of optional groups include individuals who would be eligible for public assistance if child care costs were deducted from earnings as well as disabled children eligible for Medicaid coverage if they were institutionalized but instead live at home. Table 3 shows state by state variations in coverage of optional groups as of 1988.

But despite states' ability to include optional groups in their Medicaid programs, the overwhelming number of beneficiaries — almost 80 percent — are still those who fall into the mandatory eligibility groupings.² As a result, access to health care is not determined by need for services, but rather by eligibility for these forms of public cash assistance.

In recent years, the federal government has made efforts to improve eligibility rules by expanding the definitions of mandatory coverage groups, as well as by specifying more optional groups for states to consider for Medicaid coverage. But these improvements are only incremental reforms. Moreover, gains in access have been offset by other actions by both federal and state governments — attempting to deal with their own fiscal and political realities — to control the growth, even shrink the size, of Medicaid. The bottom line after two decades of change is that today, 11 million persons live in poverty who are without any form of health insurance coverage and yet they cannot qualify for Medicaid.

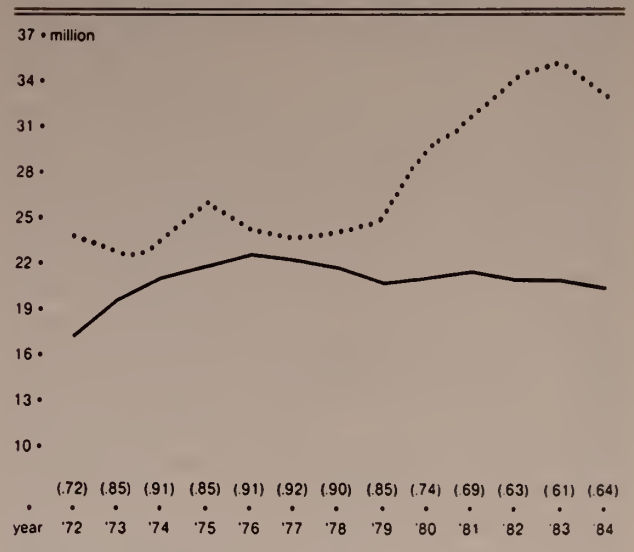
Enrollment and Spending

Medicaid now serves two distinct populations with very different health care needs: 1. the elderly, blind and disabled (SSI-eligible), and 2. families and children (AFDC-eligible).

The elderly, blind and disabled (SSI-eligible) population comprises a small and relatively constant portion of all Medicaid participants — about 30 percent — but now accounts for approximately three-quarters of the spending.² Members of this group primarily use long term custodial care services, typically received in skilled nursing homes, intermediate care facilities or from home health care professionals.

In fact, the largest component of the Medicaid budget is spent on nursing home services. And, as of 1984, expenditures for services delivered in In-

FIGURE 1
NUMBERS OF MEDICAID RECIPIENTS AND PERSONS
BELOW POVERTY LEVEL, U.S.



Persons living below poverty level •••••

Medicaid recipients —————

Ratio of Medicaid recipients to persons below poverty level is in parentheses above each year

Source: National Governors' Association.

termediate Care Facilities for the Mentally Retarded (ICF/MR), represented 12 percent of the total Medicaid budget, or \$4.2 billion. This spending now represents one out of every four dollars of Medicaid expenditures for long term care.³

In contrast, AFDC-eligible beneficiaries comprise approximately 70 percent of Medicaid participants but account for only one-quarter of all funds spent. Their health care needs are typically for preventive services, such as check-ups or well-baby care, and care of acute illnesses or injuries.

The dramatic difference in the levels of spending for these types of care is the result of the strong link between Medicaid eligibility and eligibility for other categorical programs. Under pressure to contain costs at the state level, policy makers have restricted spending by tightening state-defined eligibility requirements for their AFDC programs. But at the same time, eligibility requirements for SSI programs have not been subjected to similar restrictions by the federal government.

What Happens to Those Left Out

Low-income people — many of whom are working or are children — who are unable to obtain Medicaid have no security within the health care system. Because they cannot pay, they frequently may not seek care and when they do, they may even be denied care. If and when they ultimately obtain

TABLE 3

COVERAGE FOR OPTIONAL MEDICAID GROUPS, 1988

<i>States</i>	<i>Medically Needy</i>	<i>Families With an Unemployed Parent</i>	<i>Child Care Costs Paid by State</i>	<i>Eligible But Not Receiving Cash Assistance (AFDC/SSI)</i>	<i>Severely Disabled Children Living at Home</i>
Alabama					
Alaska				•	
Arizona					
Arkansas	•				•
California	•	•			
Colorado			•	•	
Connecticut	•	•		•	
Delaware		•			
Dist. of Columbia	•	•	•	•	
Florida	•	•			
Georgia	•	•			•
Hawaii	•	•	•	•	
Idaho				•	•
Illinois	•	•			
Indiana					
Iowa	•	•		•	
Kansas	•	•			
Kentucky	•	•			
Louisiana	•	•			
Maine	•	•		•	•
Maryland	•	•		•	
Massachusetts	•	•		•	•
Michigan	•	•			
Minnesota	•	•	•	•	•
Mississippi					
Missouri		•			•
Montana	•	•	•	•	
Nebraska	•	•			
Nevada					•
New Hampshire	•			•	
New Jersey	•	•		•	
New Mexico					
New York	•	•	•	•	
North Carolina	•			•	
North Dakota	•				
Ohio		•	•		
Oklahoma	•		•	•	
Oregon	•	•		•	
Pennsylvania	•	•	•	•	
Rhode Island	•	•	•	•	•
South Carolina		•			
South Dakota					•
Tennessee	•				
Texas	•				
Utah	•		•	•	
Vermont	•	•		•	
Virginia	•			•	
Washington	•	•		•	
West Virginia	•	•		•	
Wisconsin	•	•	•	•	•
Wyoming					

treatment, it may be delivered in the wrong place, at the wrong time, and in a way that is not cost-effective.

A poor person who is forced to pay for health care out of his or her own pocket may avoid preventive care or postpone treatment for specific problems until the illness is severe. In fact, people who are poor, sick and uninsured average six ambulatory care visits a year, but those with insurance who are also in poor health average 10 visits a year. A 1986 survey estimated that 19 million Americans encountered difficulty in obtaining health care due to financial barriers.⁴

What happens when a poor, uninsured person becomes so ill that care cannot be postponed or avoided? He or she might be treated on an emergency basis at the first hospital he or she goes to. If the bill for the treatment cannot be paid, the provider either accounts for the cost as "uncompensated" or "unsponsored" charity care to be subsidized by contributions or profit, or writes it off as bad debt. Hospitals reported a total of \$9.8 billion in the cost of unsponsored care in 1986. This figure grew by 58 percent between 1984 and 1986, up from \$5.7 billion.⁵

But in an era of cost containment and rigid payment structures, funding this increasing volume of charity care is less manageable for providers. Few doctors or hospitals, no matter how compassionate they may be, can afford to continue to render substantial amounts of treatment with either no or severely constricted payment received in return.

These circumstances do not allow the health care system to do its job properly. Hospital emergency rooms are too frequently used to provide routine care, tying up resources and personnel better suited to genuine emergencies; and seriously ill patients receive costly and intensive treatment that could be avoided if they had access to preventive or early treatment. Moreover, a significant number of persons fail to receive care at all.

Benefits

The federal government specifies the basic services that states must cover in their Medicaid programs. Required benefits include coverage for services from health care professionals, inpatient and outpatient services in hospitals or clinics, laboratory and x-ray tests, and periodic diagnosis of illnesses for children and young adults under age 21. Table 4 lists these mandatory benefits as well as the optional benefits, such as emergency hospital care, transportation and dental care, that states may also offer.

TABLE 4
MANDATED BENEFITS

Services Required for Those Who Are Categorically Eligible

- Inpatient hospital services (not including tuberculosis and mental health facilities)
- Outpatient hospital
- Rural health clinic services
- Laboratory and x-ray services
- Skilled nursing facility services for patients over age 21
- Early and periodic screening, diagnosis and treatment (EPSDT) for beneficiaries under age 21
- Family planning services and supplies
- Physician services
- Nurse-midwife services
- Home health services

Federally-required services for the medically needy

- Ambulatory services for children under 18 and people entitled to institutional services
- Prenatal care and delivery services
- Home health services for individuals entitled to skilled nursing facility services
- Transportation services

Major Optional Services That States May Elect to Provide

- Clinic services
 - Private duty nursing services and personal care services delivered at home
 - Dental services
 - Outpatient physical and occupational therapy and related outpatient services, including speech, hearing and language therapy
 - Eyeglasses and prescribed drugs, dentures and prosthetic devices
 - Services performed by podiatrists, optometrists, chiropractors and other specified practitioners, such as psychologists, audiologists, nurse practitioners and Christian Science practitioners
 - Other diagnostic, screening, preventive and rehabilitative services
 - Inpatient psychiatric facility services for individuals age 21 and under
 - Hospice care
 - Transportation services
 - Institutional tuberculosis care for patients 65 and over
 - Institutional mental health care for patients 65 and over
 - Care in skilled nursing facilities for patients age 21 and over
 - Emergency hospital services
 - Additional waiver services as specified by states for selected populations (e.g., the homebound elderly)
-

But states may tightly limit how, when and for how long these services will be covered. For example, Medicaid recipients may be restricted to very limited numbers of refills for prescribed medications, or be allowed to spend only 12 days per year in a hospital. Medicaid patients may be required to go to certain clinics or hospitals to receive care; or states may specifically exclude or only partially cover certain procedures, such as routine physical exams required to attend school or to get a job.

States do offer the broad categories of care specified by the federal government. But within these broad categories, latitude for variability in care not only exists but is exercised so that benefits vary widely from state to state.

Reimbursement Structure

The funding and reimbursement structure of Medicaid hinders its ability to provide consistent access to needed health care services and discourages providers from participating in the program. The problems can be traced to the federal/state funding method and state control over reimbursement rates.

Inconsistent Spending

Medicaid is jointly funded by the federal government and the states. The federal government provides a proportional match of state-allocated payments for reimbursable expenses. The intent of the matching formula is to generate equivalent amounts of spending from state to state by offsetting differences in states' capacities to fund the program.

In reality, states do not spend equivalent amounts. For example, in New York, which received a 50 percent match in 1985, an average of \$3,384 was spent per recipient that year; in Mississippi, which received a 77 percent match, average spending per recipient was \$915 as of the same year.⁶ These differences result in wide discrepancies in the quality of care that can be purchased from state to state, above and beyond variations that may be observed in costs and local economies.

Moreover, these differences among states are less the result of the matching fund arrangement than of the states' own political and budgetary decisions about the quantity of care they wish to offer their poor citizens. In fact, several studies indicate that revising the matching formula would not fully eliminate the spending variations even though more equitable distribution of tax burdens relative to states' financial capacities would be anticipated.⁶

Low Pay, Slow Pay

The states assume the responsibility for reimbursing health care providers, and, just as with eligibility and benefits, they have considerable flexibility in developing and administering reimbursement policies.

When Medicaid was enacted, reimbursement for inpatient hospital services and nursing homes was linked to Medicare's calculation of "reasonable costs." Since 1980, however, a number of Congressional actions have permitted states to establish different methodologies for paying hospitals and physicians. States responded with different payment mechanisms, but overall the actions they took reduce reimbursements. Research has shown that pay-

ment rates for many providers are not close enough to prevailing rates to encourage broad participation. For example, the average Medicaid reimbursement for a brief physician office visit in California is \$11.04, compared to \$34.04 paid by Blue Cross/Blue Shield in that state and for the same service.⁷ Similarly, Medicaid's average payment for obstetrical care is \$1,310, compared to a national average of \$3,440 for such care delivered in the non-government sector.⁸ The result is that many types of care are virtually unavailable to many Medicaid beneficiaries.

States that offer extensive packages of Medicaid benefits may limit reimbursement in another way: pay less for each of many services, rather than pay closer to the market rate for just a few services. With a few exceptions, low payment rates generally correlate with a large number of Medicaid benefits, and vice versa.⁹

To administer these payment systems, states also require extensive documentation of services rendered. The paperwork is cumbersome and confusing and, when combined with typical slow-pay policies, states' Medicaid bills may be paid months after service is rendered. These delays tend to further discourage provider participation in the program.

★★★

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THE PRESIDENT'S PAGE

DAVID R. STECKLER, M.D.

Changes Recommended in Medicare Payment

THE Physician Payment Review Commission has recently issued its preliminary recommendations to Congress to (in the Commission's words) "rationalize the pattern of payments to physicians by Medicare and to slow the rate of increase in program costs so they are affordable to the beneficiaries and the taxpayers." These recommendations should be of particular interest to our profession not only because of their impact on Medicare but also on other third party payors.

You will recall that the Commission was established by Congress as an advisory body on Medicare Physician Payment issues. The Commission is composed of physicians, economists and others and one of the physician members of the Commission, Dr. Jim Bob Brame of Texas, will be a speaker at our upcoming annual session.

The Commission is recommending four changes pertaining to the Medicare program. These include: a Medicare fee schedule based primarily on resource costs following the methodology (with refinements) of the Harvard Resource Based Relative Value Study Project; limits on balance billing to Medicare beneficiaries; establishment of expenditure targets; and increased research on effectiveness of medical services and development of practice guidelines.

The Medicare fee schedule recommended by the Commission would be phased in over several years and include all specialties. The fee schedule would consist of a Relative Value Scale (RVS) indicating the value of each service or procedure relative to others, a conversion factor to translate the RVS into a fee for each service, and a geographic multiplier.

The Commission's recommendations concerning a conversion factor and geographic multiplier are of particular significance. The Commission recommends that the geographic multiplier reflect only variation in overhead costs of practice and states that "the amount physicians receive for their time and effort, after subtracting overhead costs, should not vary by locality." The Commission also recommends that the conversion factor used to translate the RVS into a fee schedule be updated annually but included as one element in a conversion formula would be the difference between targeted and actual expenditures.

(Continued on page 127)

Billboards

Have you noticed a cigarette commercial on a billboard lately? If so, is there a real difference between this form of advertising and television advertising?

If the family automobile is considered an extension of the family living room, there is no real difference. Should our children, riding on public highways, be involuntarily exposed to misleading advertising promoting a known health hazard? If not, shouldn't organized medicine press for the removal of advertisements for all tobacco products from billboards? This would seem to be a logical step in the continuing fight against the hazards of tobacco.

GEORGE E. ABRAHAM, M.D.
Associate Editor

PRESIDENT'S PAGE

(Continued from page 126)

Following the Commission's recommendations, target rates of increase would not vary substantially the first few years from baseline rates of increase and would begin with a single target at the national level. Based on experience and further refinement, however, the Commission anticipates multiple targets evolving for states or carrier areas or for category of services. Broadening the target to include the rate of hospital admissions is also indicated as a possible direction.

The Commission believes that expenditure targets will not alter the financial incentives for individual physicians and their patients. Rather, the Commission sees the incentives falling to the physician community which would respond through education and through support of peer review.

(Continued on page 134)

Medico-Legal Brief**Company and Company Physicians
Liable for Concealing Employees' Diseases**

A company, company physicians, and others were liable for concealing employees' asbestos-related diseases, a New Jersey appellate court ruled.

Several employees or their widows filed suit against the company where they worked and against its physicians for failure to warn them of the known risks of asbestos and their resulting asbestos-related medical conditions. The employees were all involved in working with pipes and tank insulation in the company's plants. They worked with and around asbestos-containing material on a frequent basis. Each employee received an annual physical examination and chest X-rays from the company physicians. They claimed that they were not told that anything was wrong with them.

On remand from an earlier decision, a trial court awarded them compensatory and punitive damages in the amount of \$1,382,500. Affirming the decision, the appellate court said that there was sufficient evidence that the company and the company physicians engaged in a deliberate corporate strategy to conceal the employees' asbestos-related diseases that were discovered by company physicians. — *Millison v. E.I. du Pont de Nemours and Company*, 545 A.2d 213 (N.J. Super. Ct., App. Div., July 22, 1988)

JOURNAL MSMA invites your participation. Please address letters, comments or inquiries to the Editors, P.O. Box 5229, Jackson, MS 39296-5229.

The Caduceus Revised

The emblem held by Aesculapius, the Greek god of medicine, is purported to be the only true symbol of medicine. This emblem is a single serpent coiled around a staff. The emblem of medicine in the United States is the caduceus, consisting of two serpents intertwined around a wand, surmounted by two small wings or a winged helmet. The caduceus, however, is held by most authorities to be the shield of Hermes, the Greek god of trade. One astute authority traces the caduceus to Mesopotamia, surmising the emblem to be a symbol for the god who cures all illness. The opinion of this brilliant and thorough researcher is, of course, obviously correct, at least in the considered opinion of the majority of physicians in the United States.

Although sheer speculation, it is feasible the emblem of medicine may have been changed for protective purposes after the untimely murder of Aesculapius by his father, Zeus. Zeus, fearful that the curing of illness would render mortals immortal, killed Aesculapius with a thunderbolt. Of course, the curing of illness will not render mortals immortal; however the curing of illness will prolong

lives. Prolonging lives will increase the number of senior citizens, adding cost to the Medicare system. Therefore, it may be prudent to keep a watchful eye on the Department of Health and Human Services as ominously charged clouds seem to be forming over that Department at a rapid rate. The sparks currently emitting from the Department seem to be striking the health care system with regularity; the recipients of the health care system to have also taken a few serious strikes.

If by some strange quirk of fate the majority of the pseudoscholars are correct, and the caduceus is actually the shield of Hermes, the selection of the caduceus as the emblem of medicine may have been an ominous forecast of the emerging view of medicine seemingly held by much of the general public and by many politicians.

The term caduceus comes from the Greek *karykeion*, meaning herald's badge of office. The bearer was considered a sacred person and was not to be molested. To the Romans, the caduceus was a symbol of normal equilibrium and good conduct; it was used as a flag of truce. Today, the bearer is not considered a sacred person; he is often molested by Medicare, Medicaid, lawyers, and insurance companies, especially gatekeepers of insurance companies. There is little equilibrium in medicine today; the truce that may have existed in the past appears to be unilateral.

Regardless of its origin, the caduceus remains the accepted emblem of medicine in the United States. Since the face of medicine is changing, perhaps we should consider revising the caduceus.

The symmetrical and bilateral arrangement of the caduceus represents active equilibrium of opposing forces, balancing one force against an opposing force in such a way as to create a higher, more stable form. The balance of forces is twice stated. The serpents represent instincts, or lower forces, balancing one against the other. The opposing serpents support the wings, which represent spirit, or higher level forces, which are in turn self balancing. Since the balance of medicine has been essentially destroyed, the revised caduceus should be asymmetric. Since unbalanced instincts seldom support higher forces, the wings, or winged helmet, become unsupported and therefore assume a less lofty position.

The serpents are purported to represent wisdom, healing, and fertility; the undulations of the serpents, by analogy, represent fire and water. One serpent represents the natural process of illness; its counterpart represents convalescence. In esoteric Buddhism, the serpent represents a force called *Kimdalini*, or the power of pure energy. The wis-



Figure 1. The current caduceus.

dom of medicine has been, and continues to be, challenged; medicine, by its loss of potency, is becoming infertile. Fire and water are no longer recognized as fundamental elements; the frustrations of medicine have depleted, or at least considerably diminished, the pure energy of medicine. Illness and convalescence are inseparable, except convalescence is usually on the tail end of illness. Convalescence is frequently divided into two phases, hospital and home. The current trend is for hospital convalescence to be shortened, resulting in prolongation of home convalescence. The net compromised result is probably best represented by a single, not too energetic serpent with two tails, one tail being slender and prolonged, while the other tail is foreshortened. The tails, representing convalescence, seem to be going in separate uncontrolled directions.

The wand represents power and earth. Since modern scientific knowledge has demonstrated that earth is not a fundamental element, its importance has been considerably diminished. Also, since the power of medicine has been considerably diminished by federal and third party intervention, the size of the wand should be diminished. Under the circumstances, perhaps a walking stick would be more appropriate. Of course, serpents have no hands to use walking sticks, although the use of a walking stick appears to be necessary. Since liberties have been taken with the health care system, perhaps liberties can be taken with the emblem.

The wings, or the winged helmet, represent diligence and lofty thoughts. The constant bombardment of hundreds upon hundreds of pages of rules, regulations, memoranda, Dear Doctor letters, and requests for information previously furnished or totally unobtainable, from medicare, medicaid, IPA's, PPO's, HMO's, and insurance companies, combined with persistent telephone requests and conversations with gatekeepers of questionable intellectual capabilities, who appear to make remote control medical decisions without seeing or exam-



Figure 2. The caduceus revised.

ining patients, thwart all diligence and make lofty thoughts all but impossible. Therefore, the wings or winged helmet should be reduced or deleted. Under the circumstances, with the constant inundations, perhaps water wings would be more appropriate. If the winged helmet is used, in view of the introduction of commercialism into medicine, combined with the loss of altitude of lofty thoughts, perhaps a baseball cap, sans wings, but with a commercial message, would be more appropriate.

Considering all the indicated changes in the caduceus, the revised caduceus would probably resemble the figure above.

DONALD E. COOK, M.D.
Meridian, Mississippi

Mark Your Calendar Now!

121st Annual Session

May 31-June 4, 1989

5 Reasons Why You Should Go to Biloxi*

- 1. You Can Make Your Voice Heard.** The MSMA Annual Session is an opportunity to participate in your association's policy-making activities. Express your views at reference committee hearings. Participate in the representative process in the House of Delegates.
- 2. Get Information About Issues Affecting Your Practice.** Hear outstanding speakers discuss topics of interest to you. Listen to their suggestions about dealing with issues. Find out what's being done in your behalf. Here are a few topics you can expect this year:
 - "MD Rights and Duties Under the Health Care Quality Improvement Act"
 - "Current Legal Issues for the Hospital Medical Staff"
 - "Hospital Medical Ethics Committees"
 - "Health Issues before the 101st Congress"
 - "The Physician Payment Review/Harvard Resource Based Relative Value Study"
- 3. Obtain CME Credit.** Scientific programming and exhibits will provide updates in these areas and more:
 - "Epidemiology of Tick-Borne Diseases"
 - "Lyme Disease"
 - "Psychiatric Emergencies"
 - "Gallstone Lithotripsy"
 - "Trauma Helicopter: Use or Abuse?"
 - "Post-Op Pain Management"
 - "Musculoskeletal Magnetic Resonance Imaging"
 - "Outpatient Management of Burn Injuries"
 - "Recent Advances in Arthroscopic Surgery"
- 4. Join Your Colleagues . . .** for medical alumni reunions and specialty society meetings.
- 5. Your Family Will Enjoy the Special Events.** The program includes tennis, golf, deep-sea fishing, and other special activities, including opportunities to enjoy the sun, fun, and atmosphere of the Gulf Coast.

***For MSMA's 121st Annual Session, May 31-June 4, at the
Royal d'Iberville Hotel.**

MEDICAL ORGANIZATION

Physician Reimbursement Issues On 121st Annual Session Program

"The Future of Physician Reimbursement under Medicare" will be presented by Dr. Jim Bob Brame, a member of the U.S. Physician Payment Review Commission, during MSMA's 121st Annual Session, set for May 31-June 4 in Biloxi. Dr. Brame will deliver his address during the Mississippi Foundation for Medical Care (MFMC) meeting on Thursday, June 1.

Physician reimbursement is a topic that appears in several forms on the five-day Annual Session agenda. Dr. Robert McAfee, a member of the AMA Board of Trustees, will present "Relative Value or Early Retirement" during the opening session of the House of Delegates on Thursday morning. Dr. Richard J. Field, Jr. of Centreville will discuss "A Blended Relative Value Scale — The American College of Surgeons Proposal" during the annual meeting of the Mississippi Chapter, American College of Surgeons, which is set for Friday, June 2. A "Reimbursement Seminar" is scheduled on Saturday for members of the Mississippi Chapter, American College of Emergency Physicians.

In addition to his presentation to the House of Delegates, Dr. McAfee, a Maine general surgeon, will also deliver the James Grant Thompson Memorial Lecture during the Surgery Plenary Session on Friday. His topic will be "The Maine Medical Assessment Project — A Study in Small Area Variations."

"Health Issues before the 101st Congress" will be discussed by Dr. John Zapp, director of the AMA's Washington office, at the annual meeting of the Young Physicians Section on Wednesday, May 31.

MSMA members and hospital administrators from across the state are invited to attend the annual meeting of the MSMA Hospital Medical Staff Section on Saturday morning, June 3. The program includes: "The Health Care Quality Improvement Act," "The Hattiesburg Ethics Forum," and "Trends in Hospital Medical Staff Law."

Members will receive CME credit for attending scientific programs. The Medicine Plenary Session, under the direction of Dr. John Hassell, includes

these topics and speakers: "Lyme Disease," by Dr. William Causey; "Epidemiology of Tick-Borne Diseases in Mississippi," by Dr. F. Ed Thompson; "Psychiatric Emergencies," by Dr. Red McMichael; and "Gallstone Lithotripsy," by Dr. Carol Scott-Conner.

The Surgery Plenary Session, jointly presented by the MSMA and the Mississippi Chapter of the American College of Surgeons, is under the direction of Dr. James Hughes. In addition to the talks by Dr. McAfee and Dr. Field, the program includes: "Musculoskeletal Magnetic Resonance Imaging," by Dr. William Tew; "Trauma Helicopter: Use or Abuse" by Dr. Robert Jorden; "Outpatient Management of Burns," by Dr. John Griswold; "Recent Advances in Arthroscopic Surgery," by Dr. F. H. Buddy Savoie; "Postoperative Pain Management," by Dr. Edwin Dodd; and "Gunshot Wounds of the Head: What is the Prognosis?" by Dr. Lynn Rogers.

The annual President's Reception for MSMA and MSMA Auxiliary members and guests is scheduled for Wednesday evening, May 31. The MSMA/MSMA Auxiliary Dinner will be held Friday, June 2 and will feature a "Swamp Party" theme, complete with a cajun buffet and music. An award will be presented to the best-dressed couple. During the reception preceding the dinner, a silent auction will be conducted by the MSMA Auxiliary, with proceeds benefiting the AMA-ERF.

As in past years, the Annual Session agenda includes a tennis tournament, a golf tournament, and a deep-sea fishing rodeo. This year the Auxiliary has planned additional special activities for children.

The MSMA again will host a continental breakfast for members and guests prior to the Sunday morning church services. The closing session of the House of Delegates will take place Sunday morning.

MSMA members are encouraged to make reservations as soon as possible. You may return the hotel reservation card which was mailed with the March 22 "MSMA Report" or telephone the Royal d'Iberville Hotel.

ACS Trauma Chair Directs Life-Saving Course at UMC



Dr. Briggs Hopson, Jr. of Vicksburg, chairman of the State of Mississippi Committee on Trauma of the American College of Surgeons, at right, directed a team of ATLS instructors for the Advanced Trauma Life Support provider's course at the University of Mississippi Medical Center in Jackson in February. With him are from left, Dr. Dwight Keady, Jr. of Madison, Dr. John Chauvin of Jackson and Dr. William E. Kergosien of Corpus Christi, Tex. Primary care and emergency care physicians, with the help of Hinds Junior College students moulaged with multiplied injuries, tested their skills in advanced life-saving techniques and stabilization critical in the first hour of trauma management.

Dr. Tom Houston Honored By Surgeon General

A graduate of the University of Mississippi School of Medicine has been honored by the Surgeon General of the U.S. Public Health Service, C. Everett Koop, M.D., for outstanding contributions to public health promotion and health education.

Dr. Thomas Houston, director of the family practice residency program at HCA Wesley Medical Center in Wichita, Kansas, earned his B.A. from the University of Mississippi in 1972 and his M.D. in 1977 from UMC. He is a native of Starkville.

Dr. Houston, along with Drs. John Richards and Alan Blum, co-founders of the health education group Doctors Ought To Care (DOC), received the Surgeon General's Medallion of Honor in October. DOC Focuses on providing health and lifestyle information to young people, with an emphasis on communicating through advertisements the risks of alcohol and drug abuse, smoking and teenage pregnancy. The group is especially known for its aggressive ads and public service announcements denouncing cigarette smoking and other forms of tobacco use.

DOC also encourages physicians to take an active role in not just treating illnesses, but in educating patients about ways to stay healthy. Dr. Koop praised DOC's work, citing the critical need to educate young people to the dangers of AIDS, smoking and other health hazards.

"The award is given on a discretionary basis to acknowledge contributions to the public health, exemplary service and a high degree of dedication to the mission of public health," says Suzanne Dahlman, staff director of the Surgeon General's office. She adds that it rarely is given to those not in governmental public health positions.

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NEW MEMBERS

CHAPMAN, STANLEY W., Jackson. Born Brooklyn, NY, Aug. 2, 1946; University of Rochester School of Medicine, Rochester, NY, 1968; interned and medicine residency, Emory University, Atlanta, GA, 1972-74; allergy residency, National Institutes of Health, Maryland, 1974-77; infectious disease residency, University of Rochester, NY 1977-79; elected by Central Medical Society.

DUNCAN, ELBERT ALAN, Tupelo. Born Chipley, FL, Oct. 18, 1954; M.D., University of Alabama School of Medicine, Birmingham, 1980; interned and radiology residency, Naval Hospital, San Diego, CA, 1980-85; elected by Northeast Mississippi Medical Society.

HILL, DAVID R., Whitfield. Born Louisville, MS, April 29, 1954; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned one year, same, and psychiatry residency (September 1987-June 1988); elected by Central Medical Society.

HOOD, LOUIE F., Charleston. Born Montgomery, AL, Nov. 19, 1954; D.O., University of Health Sciences, Kansas City, MO, 1983; interned one year,

Orlando General Hospital, Orlando, FL, 1983-84; elected by Clarksdale and Six Counties Medical Society.

KALLIO, DAVID O., Philadelphia. Born Boston, MA, Sept. 10, 1946; M.D., Dalhousie University Faculty of Medicine, Halifax, Nova Scotia, 1978; interned and one year pathology residency, same; elected by East Mississippi Medical Society.

RICHARDSON, CHARLES DAVID. Hattiesburg. Born Union, MS, March 9, 1957; M.D., University of Mississippi School of Medicine, Jackson, 1982; interned, one year, Baptist Memorial Hospital, Memphis, TN; ophthalmology residency, University Medical Center, Jackson, MS, 1983-86; elected by South Mississippi Medical Society.

SKELTON, DEBORAH LEE, Jackson. Born Memphis, TN, May 12, 1953; M.D., University of Mississippi School of Medicine, Jackson, 1981; interned and medicine residency, University of Texas Southwestern, Dallas, 1981-84; gastroenterology residency, Duke University Medical Center, Durham, NC, 1984-86; elected by Central Medical Society.

PRESIDENT'S PAGE

(Continued from page 127)

The Commission does not recommend mandatory assignment for all Medicare claims for physicians' services. Instead the Commission proposes limitations on charges for unassigned claims to a fixed percentage of the Medicare fee schedule amount and elimination of balance billing for Medicare beneficiaries whose incomes are below the federal poverty level.

Finally, the Commission believes that there should be a substantial increase in federal support for research to determine the costs of alternative medical procedures and the best ways to provide care. This research according to the Commission should result in practice guidelines which are widely disseminated to the medical profession and patients.

No doubt the Commissioners' recommendation will evoke much comment and debate over the next few months. Likewise, we can expect Congress to take some action on the recommendations.

**Plan Now to Attend
MSMA's 121st Annual Session
May 31 through June 4**

PERSONALS

ORLANDO ANDY of UMC presented papers at the Southern EEG Society meeting in St. Petersburg, Florida and at a meeting in New Orleans on Neurobehavioral Problems in Epilepsy.

BRYAN BARKSDALE of Jackson has been elected chairman of the Guardian Society of the University of Mississippi Alumni Association.

DIANE BEEBE of UMC presented a workshop at the Society of Teachers of Family Medicine Predoctoral Education Conference in St. Petersburg, Florida.

ELDON BOLTON of Biloxi has retired from active practice, and announces that JAMES P. MARTIN has associated with Bolton-Middleton Clinic for the practice of internal medicine and nephrology.

MICHAEL BROOKS of Laurel spoke on skin cancer at a meeting of the Twentieth Century Literary Club in Laurel.

WALLACE CONERLY of UMC chaired the annual meeting of the Tri-State Thoracic Conference in Biloxi.

ELIZABETH DAY CONNELL announces the opening of her office for the practice of psychiatry at Suite 1050, Riverside Place, in Jackson.

BRYAN COWAN of UMC gave a lecture for a continuing education update in Columbia, Missouri.

BOB DONALD of Pascagoula participated in a medical missions project in Honduras.

JOHN M. DOWBAK has opened his office for the practice of orthopedic and reconstructive surgery at 308 Hospital Road in Starkville.

J. B. FRANKLIN of Biloxi has been named chief of staff at Community Hospital.

H. ALLEN GERSH of Hattiesburg has been elected vice president of the National Dialysis Association.

JAMES C. GRAHAM has been named staff physician at Jasper Medical Services in Heidelberg.

HAROLD HAWKINS of Ocean Springs has been inducted as a fellow of the American Academy of Orthopaedic Surgeons.

HARPER HELLEMS of UMC recently received the Founder's Medal recognizing outstanding contributions in medicine which is presented by the Southern Society for Clinical Investigation.

W. H. HENDERSON of Oxford has been named chief of staff at Oxford Lafayette Medical Center. T. E. WILKES, JR. is chairman of surgery; E. C. STONE is chairman of medicine.

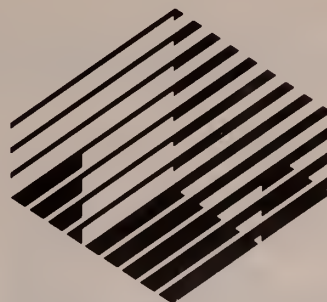
JAMES HOLZHAUER of West Point was speaker at a seminar on teenage pregnancy sponsored by the Organization of West Point Educators.

HAROLD K. HUDSON of Tupelo received the Julius G. Berry Outstanding Volunteer Award presented by the United Way of Greater Lee County.

SAM JOHNSON of UMC was site visitor at the University of Texas in San Antonio.

DAVID O. KALLIO has opened his office for the practice of family medicine at 103 Medical Arts Clinic in Philadelphia.

HERBERT LANGFORD of UMC was a faculty member at the 36th Postgraduate Course of the American Diabetes Association in Dallas, and presented an abstract at a meeting in New Orleans, of the Southern Section of the American Federation for Clinical Research.



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PERSONALS/Continued

CHRIS PUCKETT of UMC presented a paper at the 16th Neonatal and Infant Respiratory Symposium in Vail, Colorado.

MICHAEL LeBLANC of UMC made a presentation at a meeting of the Southern Society for Pediatric Research in New Orleans.

TERRY A. LEWIS announces the opening of his office for the practice of obstetrics, gynecology and infertility at 618 Alcorn Drive in Corinth.

JOSE MADARA of Booneville has been inducted as a fellow of the American College of Surgeons.

JOHN W. McFADDEN of Tupelo published an article in the August 1988 issue of *Spine*.

ARTHUR MATTHEWS of Biloxi has assumed the post of president, Coast Counties Medical Society.

JOSEPH R. MITCHELL of Gulfport made a presentation at a meeting of Coast Counties Medical Assistants.

CHARLES MONTGOMERY of Tupelo made a presentation on cancer at the Family Focus series at Webster General Hospital.

JOHN MORRISON of UMC made a presentation at the annual meeting of the Society of Perinatal Obstetricians in New Orleans, lectured at Emory University and Georgia Baptist Medical Center in Atlanta, and presented grand rounds at the University of Utah.

STEVE PARVIN of Starkville has been appointed by Governor Ray Mabus to the Mississippi State Board of Medical Licensure.

SESHADRI RAJU served as a member of the faculty for the American Venous Forum in New Orleans and also made presentations to the Mississippi Gastrointestinal Society and the North Jackson Kiwanis Club.

ROBERT RHODES of UMC attended a meeting of the Executive Council of the Society of University Surgeons in Baltimore.

CAROL SCOTT-CONNER of UMC made a presentation at the Southeastern Surgical Congress in Tarpon Springs, Florida.

ROBERT SMITH of UMC attended a meeting of the American Heart Association's Stroke Council in San Antonio.

ROBERT SUARES of Greenville was king of the 1989 Greenville Junior Auxiliary Charity Ball.

MAX TAYLOR of Tupelo made a presentation on AIDS at a North Mississippi Medical Center's symposium, "Contemporary Health Issues of the Workplace."

THAD WAITES of Hattiesburg made a presentation on heart disease at a public education forum at Forrest General Hospital.

W. LAMAR WEEMS of UMC attended a meeting in Chicago of the AMA Ad Hoc Committee on Medicare Reform.

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POSTGRADUATE CALENDAR

April

OBSTETRICS AND NEWBORN UPDATE

April 20

MISSISSIPPI PERINATAL ASSOCIATION

April 21

Ramada Renaissance Hotel, Jackson

10TH ANNUAL SPRING SONIC SYMPOSIUM

April 21-22

Ramada Renaissance Hotel, Jackson

RENAL UPDATE

April 21-22

Ramada Inn Coliseum, Jackson

May

PEDIATRIC SPRING MEETING

May 5

Ramada Renaissance Hotel, Jackson

FAMILY PRACTICE UPDATE

May 10-13

Ramada Renaissance Hotel, Jackson

MEDICAL EMERGENCIES

May 19

Ramada Renaissance Hotel, Jackson

For more information or a program brochure, contact the University of Mississippi Medical Center Division of Continuing Health Professional Education, 2500 North State Street, Jackson, Mississippi 39216-4505; or call (601) 984-1300.

Review A Book

The following books have been received by the JOURNAL MSMA. Members of MSMA interested in reviewing one of these volumes should address requests to the Editor. After submitting a review for publication, you may keep the book for your personal library.

Disease and Distinctiveness in the American South. Todd L. Savitt and James Harvey Young. University of Tennessee Press, 1988.



BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

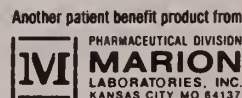
HOW SUPPLIED

CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other.

Issued 1/87

Reference:

1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.




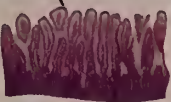



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Don't let your kids take a powder. Or anything else.

Together, we can help Take a Bite out of Crime.



RECOLLECTIONS

Twenty years ago, the April issue of JOURNAL MSMA included the program for the 101st Annual Session, set for May 12-15, 1969. The meeting was scheduled at the Buena Vista Hotel in Biloxi. At the conclusion of the annual meeting, Dr. James L. Royals was to be installed as president of the MSMA, succeeding Dr. Joseph B. Rogers. Presiding over sessions of the House of Delegates that year were Dr. William E. Lotterhos, M.D., speaker, and Dr. John B. Howell, Jr., vice-speaker.

Included in the list of scientific exhibits were: "Surgical Treatment of Coronary Artery Disease," by Dr. Thomas L. Kilgore; "A New Antihypertensive Agent: Double Blind Evaluation," by Dr. Raymond F. Grenfell and Dr. William C. Holland; and "The Artificial Kidney in Acute Kidney Failure," by Dr. John D. Bower.

Among scientific topics to be presented were: "Therapeutic Considerations in Endometrial Cancer," by Dr. Richard C. Boronow; "Granulomatous Colitis," by Dr. William O. Barnett; "Curable Hypertension," by Dr. Herbert G. Langford; "Acute Illness Among Returnees from Viet Nam," by Dr. Robert Blount; "Management of Intraocular Foreign Bodies," by Dr. Morton F. Goldberg of Arlington, Virginia; "Clip Grafts for Intracranial Aneurysms," by Dr. Thoralf M. Sundt, Jr., of Memphis; "Subaortic Stenosis," by Dr. Karl Hatten; and "Pediatrics 1969: Recent Advances and Future Trends," by Dr. Blair Batson.

Ten years ago the JOURNAL MSMA's April issue included the program for the 111th Annual Session, held May 6-10, 1979 at the Biloxi Hilton. Four seminars were scheduled, along with 14 scientific section meetings. Seminar topics included "Practice Management," presented by the Clinic Managers Association; "Diseases of the Stomach," by the Mississippi Gastrointestinal Association; "Medical Audit," by the Mississippi Foundation for Medical Care; and "Urology for the Family Practitioner," by the Mississippi Urological Association.

Dr. Carl G. Evers was 1979 MSMA president, Dr. Gerald P. Gable was president-elect, and Dr. J. Elmer Nix was MSMA's secretary-treasurer and chairman of the Council on Scientific Assembly, which reported the Annual session plans. Presiding over that year's House of Delegates sessions were Dr. R. Faser Triplett and Dr. Walter H. Rose, speaker and vice-speaker, respectively.

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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

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Indications: Yocon[®] is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

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Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

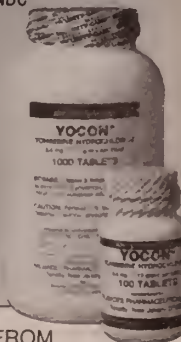
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

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References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev 1/85.
3. Weekly Urological Clinical letter. 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 18-22, 1989, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 121st Annual Session, May 31-June 4, 1989, Biloxi. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, Aug. 2-6, 1989, Gulf Shores, AL. Mrs. Alyce Palmore, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. H. S. Barrett, Secy., P.O. Box 1810, Gulfport 39501. Counties: Hancock, Harrison, Stone.

Delta Medical Society, 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSota County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Emrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Granada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. David H. Irwin, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. D. Winn Walcott, Secy., 2173 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Jack Hollister, Secy., P.O. Box 9000, Columbus 39705. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. John J. McClosky, Secy., 3003 Short Cut Rd., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society, 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Wayne M. Pitre, Secy., 1202 Mission Park Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials for Accreditation of Institutions and Organizations Offering Continuing Medical Education Programs" of the Liaison Committee on Continuing Medical Education. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

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735 Riverside Drive
Jackson, MS 39202

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830 Gloster Avenue
Tupelo, MS 38801

Forrest General Hospital
Box 1897
Hattiesburg, MS 39401

Mississippi Baptist Medical Center
1225 N. State Street
Jackson, MS 39201

Gulf Coast Community Hospital
4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Box 1488
Natchez, MS 39120

King's Daughter Hospital
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Brookhaven, MS 39601

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Lakeland Drive
Jackson, MS 39208

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Biloxi, MS 39533

Jeff Anderson Regional Medical Center
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Meridian, MS 39301

Northwest Mississippi Regional Medical Center
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Pascagoula, MS 39567

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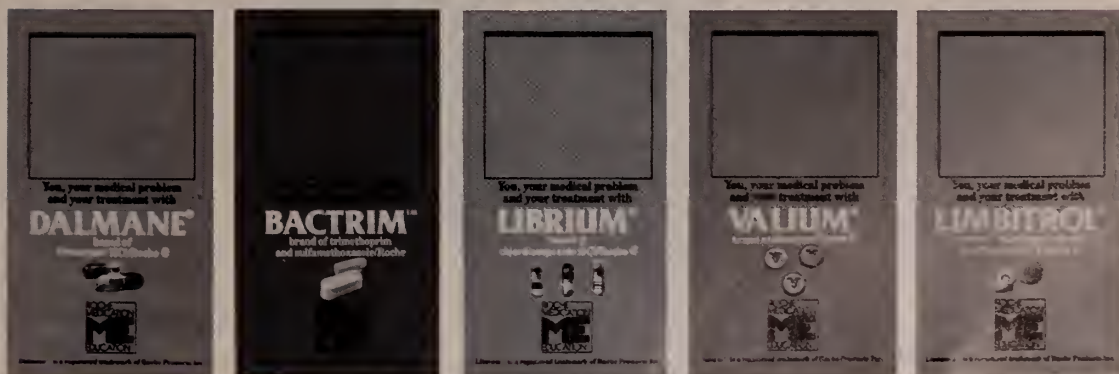


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PHYSICIAN completing residency in general surgery, and spouse (board-eligible pediatrician) seek practice opportunities in Mississippi. Location flexible. Contact Dinesh Ranjan, M.D., 2118 Chantilla Rd., Catonsville, Md 21228.

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PHYSICIAN seeks practice opportunity in Mississippi. Native of Louisiana, completed residency in internal medicine at Medical College of Virginia (1986). Contact Sharon Pancoast, M.D., 1033 St. Ann Dr., Richmond, VA 23225.

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Contraindications: VASOTEC® (Enalapril Maleate, MSO) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: **Angioedema:** Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, Drug Interactions and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: **General:** **Impaired Renal Function:** As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Osmotic reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See Drug Interactions.)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. It is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyl-dopa, nitrates, calcium-channeling agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies in pregnant women. VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of ¹⁴C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 298/ patients.

Hypertension: The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

Heart Failure: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, Hypotension), cardiac arrest, pulmonary embolism and infarction, rhythm disturbances, atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), prostate hypertrophy.

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, itching, photosensitivity.

Other: Muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: **Hypertension:** In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.)

The recommended initial dose in patients not on diuretics is 5 mg once daily. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage of twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, Pharmacodynamics and Clinical Effects.) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium < 130 mEq/L) or with serum creatinine > 1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, Heart Failure, WARNINGS, and PRECAUTIONS, Drug Interactions.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD representative or see Prescribing Information, Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486.

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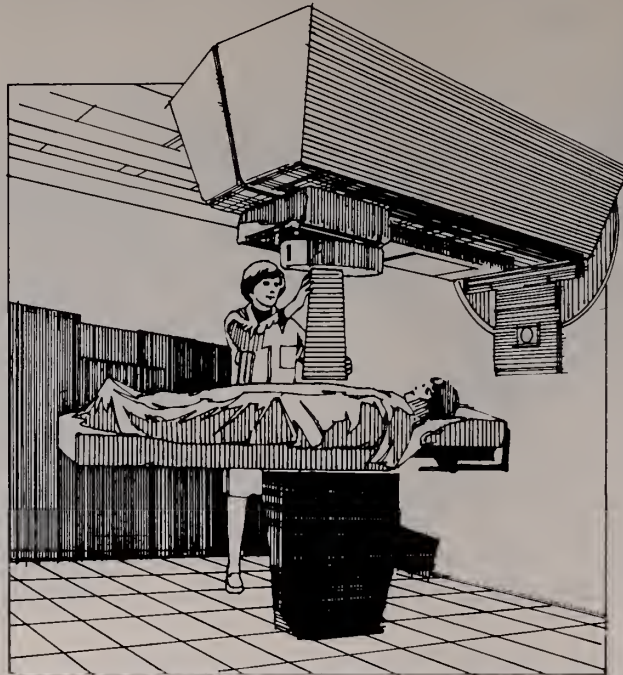
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BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other. Issued 1/87

Reference:

1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.



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Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympathicolytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

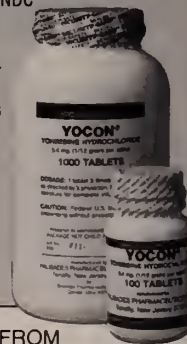
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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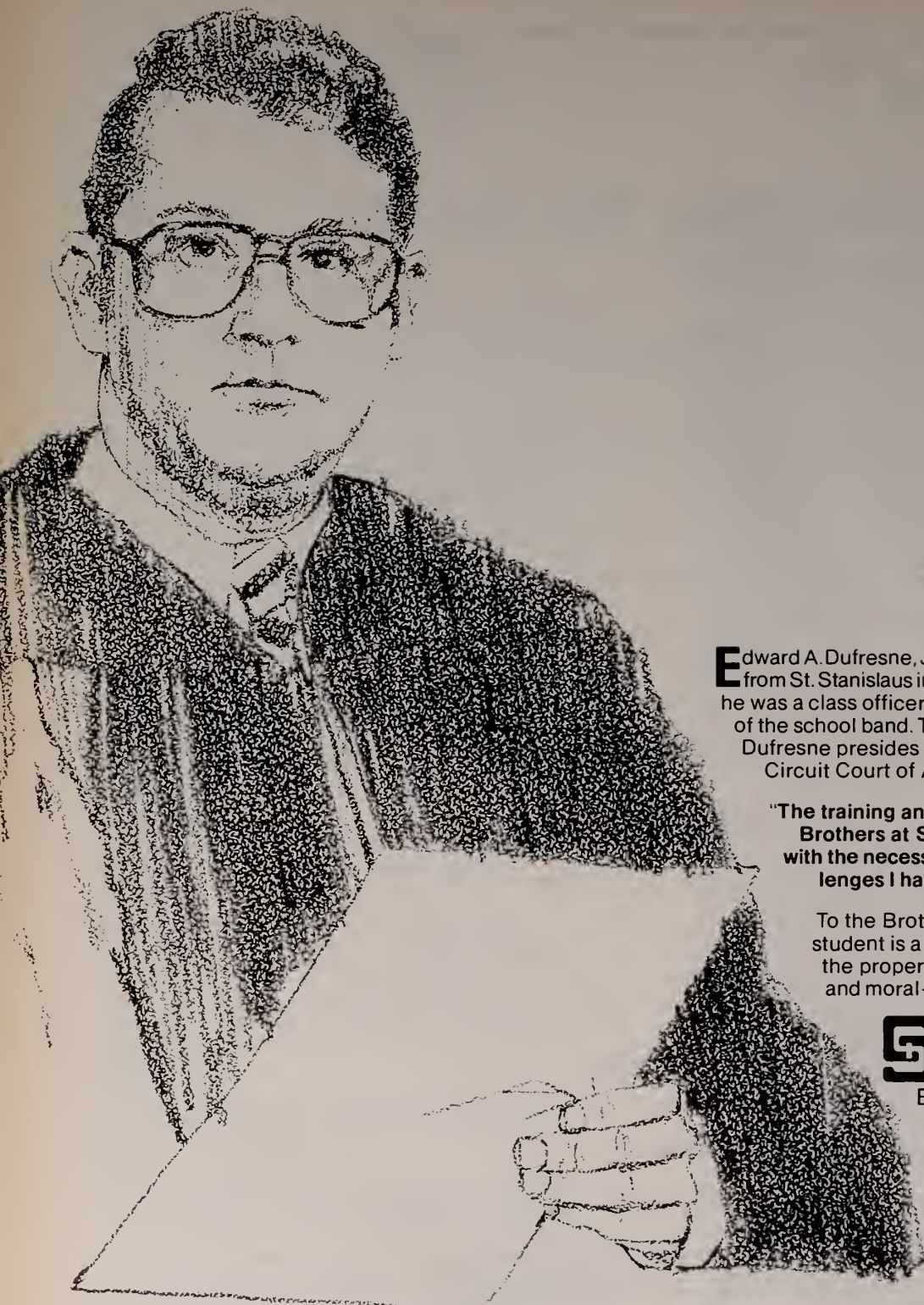


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DATELINE

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Kansas City, MO - Entries are now being solicited for the 1989 Patient Care Awards for Excellence in Patient Education. The three winners will be honored at the 11th Annual Conference on Patient Education. For information on criteria, contact Barbara Widmar, American Academy of Family Physicians, 8880 Ward Parkway, Kansas City, MO 64114; (800) 274-2237. Self-nominations encouraged.

Auxiliary Seeks Volunteers For Support Network

Jackson, MS - Volunteers are needed to participate in the Auxiliary's "Sharing Support Network," a program to help medical families cope with the stress of a malpractice suit. Success of the program requires the participation of physicians' spouses who are willing to share their own experiences. Contact the MSMA Auxiliary today to volunteer for this worthwhile program.

HIV Infection Rates Among Childbearing Women

Chicago, IL - A report in the March 24 JAMA suggests that 1 in 150 childbearing women in New York State is infected with HIV, with even higher rates in New York City -- 1 in 77 or greater. More than 1800 of 277,000 newborns tested were HIV positive. Researchers note a gap between the cumulative number of reported pediatrics AIDS cases (422 at end of 1988) and the number of infected children.

Outpatient Surgery Procedures Triple

Chicago, IL - The number of outpatient surgical procedures has nearly tripled in the years between 1981 and 1987, going from 3.6 million procedures to 9.75 million procedures, according to figures from the American Hospital Association. Outpatient surgical procedures now account for 44.4% of the total number of surgical operations, up from 18.5% of the total in 1981.

Cyclosporine May Help Psoriasis and Arthritis

Chicago, IL - Short-term, low-dose treatment with cyclosporine may help to treat both psoriasis and the associated arthritis seen in significant numbers of patients, a study in April's Archives of Dermatology suggests. The authors of the small study and an editorial writer agree that additional tests and caution are necessary in using cyclosporine as a psoriasis treatment.



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ORIGINAL PAPERS

Clinical Experience with Ciprofloxacin: Analysis of a Multicenter Study

SIDNEY ALBERT CHEVIS, M.D.

Bay St. Louis, Mississippi

WILLIAM T. OAKES, M.D.

Amory, Mississippi

CIPROFLOXACIN (CIPRO®) is a newly approved (1987) antimicrobial which demonstrated high activity in vitro against gram-negative and gram-positive aerobic pathogens.^{1, 2} It has excellent in vitro activity against *Enterobacteriaceae* species, *Pseudomonas aeruginosa*, *Haemophilus* and *Neisseria* species.³ Orally administered, ciprofloxacin exhibits therapeutically achievable Minimal Inhibitory Concentrations (MICs) against methicillin-resistant *Staphylococcus aureus* and is the most potent oral antimicrobial available for use against this pathogen.⁴ Therefore, ciprofloxacin has been regarded as an excellent oral alternative to injectable antibiotics.

Most of the literature reports double-blind, controlled comparative trials intended for submission to the FDA for marketing approval. However, these studies contain extremely restrictive inclusion and exclusion criteria and may or may not be related to how the product would perform in the day to day practice of medicine. Thus, an evaluation of the efficacy and safety of ciprofloxacin in day to day medical practice was performed. In the following, data from an open clinical multicenter study performed in the state of Mississippi is reported.

Drs. Chevis and Oakes are engaged in the private practice of family medicine.

The authors report a multicenter study of 19 patients treated with ciprofloxacin (mean daily dosage, 972 mg per day; mean duration of treatment, 8.5 days) for a variety of infections, ten microbiologically proven. Of these, bacteriologic cure equaled 70%, and improvement 30%. Overall, clinical cure equaled 73.7%, while improvement was 15.8%. No infections were classified as chronic. One adverse reaction was noted; a case of severe vomiting classified as related definitely to ciprofloxacin therapy. The patient discontinued therapy.

Patients and Methods

Guidelines for patients admitted into the study were established by a standardized protocol. Data was collected on brief, two-page Clinical Evaluation Forms (CEFs) completed by the investigators. Subsequently, the CEFs were retrieved and analyzed by Oxford Health Care, Inc., Clifton, New Jersey. Each physician investigator categorized all patients' infections as either lower respiratory tract, soft tissue, skin and skin structure, or other. Three inves-

tigators from Mississippi entered 19 patients into the study. Only those patients who received ciprofloxacin alone as antimicrobial therapy were evaluated.

Several criteria determined patient selection. Inclusions: male and female inpatients or outpatients over 18 years of age who exhibited clinical evidence of lower respiratory tract infection, skin and skin structure infection, or soft tissue infection. Exclusions: females who are pregnant, nursing, or not practicing contraception; patients with known or suspected allergy to quinolone antibiotics or with known moderately to severely impaired renal function; those displaying clinical evidence of hepatic disease or requiring other concomitant antimicrobial therapy; and patients with known clinically impaired immunological function.

Physicians were asked to record adverse reactions, their duration and intensity, and the action taken in regard to medication adjustment or outcome. Any serious or unexpected reaction was to be reported within 72 hours to Miles Inc. The investigators were to use their judgment regarding patient response to therapy and to adjust antimicrobial medication if response was determined inadequate. Patients were allowed to receive any other medication deemed necessary by the physician. The package insert acted as the guideline for prescribing information.

Bacteriology

Specimens were collected, when available, from sites of suspected infection prior to the administration of ciprofloxacin. Physicians were also asked to obtain a culture at the end of ciprofloxacin therapy if culturable material was available. Sensitivity analysis was performed using ciprofloxacin disks provided by Miles Inc. For patients with respiratory tract infections, sputum was processed for gram stain and culture whenever possible. However, many lower respiratory tract infections and closed wound infections precluded collection of a culture specimen.

Results

A biostatistician at Oxford Health Care, Inc. supervised data processing. The statistics generated were descriptive in nature, tabulated exactly from the CEF. Complete as well as incomplete CEFs were included in the results, regardless of whether the physician followed every protocol parameter. All patients were included in the analysis of clinical efficacy; however, only those patients who had a positive culture with an identified organism were

TABLE 1
FINAL CLINICAL OUTCOME CLASSIFIED BY
LOCATION OF INFECTION*

	% of total (No. of pts.)			
	Cure	Improv	Failure	Cure & Improv
Lower respiratory tract	63.6%(7)	27.3%(3)	9.1%(1)	90.9%
Soft tissue	100%(1)	0 % (0)	0 % (0)	100%
Skin/skin structure	66.7%(2)	0 % (0)	33.3%(1)	66.7%
Urinary tract	no cases reported			
Other	100%(4)	0 % (0)	0 % (0)	100%
Total	73.7%	15.8%	10.5%	89.5%

* Data available for all patients.

TABLE 2
SIX PATHOGENS IDENTIFIED IN 10 EVALUABLE CULTURES
AND BACTERIOLOGIC OUTCOME

Type of Organism	Outcome		
	Cure	Improv	Fail
<i>E. coli</i>	3	0	0
<i>Klebsiella pneumoniae</i>	2	0	0
<i>Pseudomonas aeruginosa</i>	0	2	0
<i>Staphylococcus epidermidis</i>	1	0	0
<i>Streptococcus pyogenes</i>	1	1	0
<i>Micrococcus species</i>	1	0	0

included in the evaluation of bacteriologic efficacy.

No patient who received any type of antimicrobial concomitantly with ciprofloxacin was evaluated for either safety or efficacy. All 19 patients, with the exclusion of those who received a concomitant antimicrobial, were included in the analysis of tolerance to the drug and of adverse effects of treatment. The data indicated that no patient received a concomitant antimicrobial in this study. Skewed data were eliminated when necessary.

A total of 19 patients (9 men and 10 women) aged 16 to 88 years (mean age 51.6 years) received 500 to 1000 mg of ciprofloxacin per day (mean dosage 972 mg per day) for 1 to 14 days (mean duration, 8.5 days).

The spectrum of infections treated comprises a variety that would be expected in a multicenter trial with several participating physicians from across the state. For the total patient population the majority of infections were classified as lower respiratory tract (57.9%), followed by skin and skin structure (15.8%), soft tissue (5.3%), urinary tract (0%) and

other (21%). Of note, the majority of patients treated, 83.3%, were outpatients; hospitalized patients accounted for only 16.7% treated. Two patients were continuing ciprofloxacin therapy at the time of evaluation.

Patients were evaluated for both clinical and bacteriologic efficacy. All patients who received one dose of ciprofloxacin were considered for the evaluation of the clinical efficacy of therapy, regardless of whether a culture was obtainable. Physicians were asked to rate the final clinical outcome of the infection by indicating cure, improvement or failure. Final clinical outcome of therapy with ciprofloxacin for each diagnostic category is summarized in Table 1. Clinical cure was achieved in 73.7%, improvement in 15.8% of cases. Overall clinical cure plus improvement equaled 89.5% of treated infections. Only two patients (10.5%) had outcomes considered clinical failures by the treating physician.

Patients who had an initial culture that identified a pathogen were included in the analysis of bacteriologic efficacy. Cultures were obtained in 15 patients initially. Of these, ten identified the specific bacteria cultured and the outcomes of therapy. Negative cultures and cultures indicating normal flora were not evaluated. Within these parameters, for ten of 19 patients the infection was microbiologically proven. Of the evaluable patients, bacteriologic cure equaled 70%, while improvement comprised 30%. Cure plus improvement was 100%. No failures were reported. Interestingly, bacteriologic outcome was equal to or better than the clinical outcome.

For the positively identified pathogens, the majority of infections were classified as lower respiratory tract (45.5%), followed by other (36.3%) and skin and skin structure (18.2%). No microbiologically proven infections were noted in either the soft tissue or urinary tract categories. Though urinary tract infection was not a category on the CEF, it was statistically separated for discussion and analysis. The six reported pathogens and their bacteriologic outcome are summarized in Table 2.

Adverse Reactions

All 19 patients treated with ciprofloxacin were included in the evaluation of tolerance and adverse effects related to therapy. Of the 19 patients 18 reported no side effects (94.7%). The one ADR reported was a severe case of vomiting, classified as definitely related to therapy and requiring discontinuation of therapy. No other ADRs were reported.

Abnormal laboratory findings were reported for

three patients; these abnormal laboratory reports were not related to administration of ciprofloxacin. For example, reports of chronic anemia and a positive culture and sensitivity were listed as abnormal laboratory results. These findings were not indicative of adverse effects stemming from the use of ciprofloxacin. No reports of crystalluria were found.

Discussion

A relatively new class of antimicrobials, the fluoroquinolones, has emerged as a powerful new resource for physicians to treat a broad spectrum of infections. Ciprofloxacin is a potent member of this drug classification.

Analysis of this multicenter study indicates that there is a good correspondence between the in vitro activity of ciprofloxacin and the clinical efficacy of treatment with ciprofloxacin. Clinical cure was observed in 73.7% of all infections. Cure plus improvement equaled 89.5% of all cases. Bacteriologic efficacy (cure plus improvement) equaled 100%, while clinical efficacy was 89.5%.

The safety of ciprofloxacin was assessed for all patients. Overall, therapy with ciprofloxacin was extremely well tolerated. Adverse experiences were infrequent and generally mild. Treatment with ciprofloxacin had to be discontinued for only one patient because of adverse experiences.

Furthermore, physicians reported eight classifications of medications that were administered concomitantly with ciprofloxacin. Cadiotonics, diuretics and antihypertensives headed the list. Still, adverse reactions were minimal. No patients were reported to have had an allergic reaction to ciprofloxacin, nor were any incidents of theophylline toxicity reported.

Conclusion

The isolation of etiologic bacteria is difficult, especially in infections of the lower respiratory tract and in closed wound infections. Clinical results reported here include cases with and without obtained culture and sensitivity results. Bacteriologic efficacy was determined by culture and sensitivity. The main purpose of the study was to gather a large amount of safety and efficacy data on ciprofloxacin, after its FDA approval, as used in a day to day clinical setting in order to confirm the results in smaller, more restrictive trials used for FDA approval of the product.

The present clinical experience has shown that a dosage of 500 to 1000 mg of ciprofloxacin therapy per day is effective in a broad spectrum of infections including *E. coli*, *Staphylococcus aureus*, *Proteus*

CIPROFLOXACIN/Chevis and Oakes

species, *Streptococcus* species, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa* and *Staphylococcus epidermidis*. In addition to an overall clinical efficacy (cure plus improvement) of 89.5%, the bacteriologic efficacy in ten patients was 100%.

Furthermore, the safety of ciprofloxacin was excellent. Adverse reactions were generally mild, gastrointestinal in nature and infrequent. In conclusion, it appears that ciprofloxacin offers ease of administration as well as high efficacy and safety in the

treatment of a wide variety of infections that might well have previously required parenteral therapy and/or hospitalization. ★★★

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Rheumatoid Arthritis Occurring with Sickle Cell Anemia — Treatment Dilemma

LINDA ROCKHOLD, M.D.

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ARTHROPATHY, INCLUDING TRUE ARTHRITIS, is well documented in sickle cell disease.¹⁻³ An extensive search of the literature reveals two previous reports of an association of sickle cell disease with seropositive rheumatoid arthritis.^{4, 5} A case report is described here to demonstrate the features of presentation and the difficulties encountered in medical management.

Case Report

A 45-year-old black woman with sickle cell disease was diagnosed with rheumatoid arthritis in 1980 when she presented with a symmetrical polyarthritis of proximal interphalangeal, wrist, knee, and ankle joints. She was treated with various nonsteroidal agents (naproxen, piroxicam, indomethacin, sulindac, and ibuprofen) without relief of pain. In January of 1986, during evaluation of pneumonia, she was noted to have bilateral wrist synovitis with effusions, decreased visual acuity of the left eye, and a heart murmur. At that time the latex fixation was positive, a chest x-ray was consistent with pulmonary fibrosis, and aspiration of her wrist joint revealed an inflammatory fluid with WBC of 53,000 WBC/cmm, no crystals, and negative cultures. The patient had prolonged morning stiffness, dyspnea on exertion, and a non-productive cough. She had no rash and no fever. Her two pillow orthopnea had been stable for several years and she noted persistent pedal edema on low dose furosemide. Despite persistent pain and swelling in her knees and wrists, the patient remained mobile and reasonably self sufficient.

She stated that although she had had problems with the hand-foot syndrome as a child and had been hospitalized multiple times between 1961 and 1974 for pain crises, she had had no significant problems with her sickle cell disease in several years.

The patient was referred to our institution in March 1986 for management of recurrent wrist effusions. She was admitted in April 1986 for synovectomy of her right wrist.

On physical examination the temperature was 100.2 F, pulse 88 per minute, and blood pressure 120/90 mm Hg. She was a well developed, thin, black female in no acute distress, alert, oriented, and cooperative. Multiple firm nodules were present over extensor surfaces of elbows, fingers, and the left lateral neck. A pterygium was present in the left eye. Rales were present to mid-scapula. The cardiac exam showed a dynamic precordium with a laterally displaced point of maximal impulse. A grade II/VI systolic murmur radiating to both carotids was present. Joint examination was remarkable for marked decrease in shoulder abduction and extension, bilateral mild flexion contractures of elbows, marked fluctuant synovitis of wrists which was circumferential on the right, ulnar drift of fingers with synovitis and subluxation of MCP and PIP joints (see Figure 1). Both knees were swollen with effusions and both ankles were swollen with increased skin temperature.

An ophthalmologic evaluation indicated the presence of sickle cell retinopathy.

Laboratory results obtained at admission revealed a hemoglobin of 5.9 g/dl, hematocrit 16.8%, WBC = 7600/cmm, platelets = 554,000/cmm, and a Wintrobe sedimentation rate of 33 mm/hr. Serum glucose, sodium, chloride, BUN, creatinine, and

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alkaline phosphatase were normal. The serum uric acid was 10.5 mg/dl, total protein was 5.6 g/dl, albumin 2.9 g/dl. LDH was 725 IU/l. Urinalysis showed 2+ protein with a 24 hour collection producing 21.17 grams of protein and a creatinine clearance of 92 ml/min. A chest x-ray showed cardiomegaly, increased interstitial markings with a possible overlying pneumonitis. Also, diffuse bone demineralization was present with "fishmouth" thoracic vertebrae. Cervical spine films were interpreted as severe erosion of the odontoid with a 1 cm anterior subluxation of C1 on C2. Hand films showed almost total destruction of carpal bones with erosions and joint space obliteration of all PIP and MCP joints (see Figure 2). An echocardiogram was consistent with chronic volume overload. Arthrocentesis of the right wrist showed WBC of 33,000/cmm with 78% neutrophils, no crystals, and sterile cultures. A latex fixation for rheumatoid factor was positive at 1:1280, ANA was positive at 1:220, and a hemoglobin electrophoresis showed the patient to have 96.8% hemoglobin S with 3.2% hemoglobin

A2. Skin tests showed the patient to be anergic.

An orthopedics consult was obtained and two large cysts were removed from the patient's right wrist. The procedure was performed using an axillary block with a tourniquet. There were no complications. At surgery the dorsal cyst appeared to be eroding the extensor tendons. Both the dorsal and volar cysts contained a thick, purulent-appearing material. No organisms were seen on gram stain, and all cultures remained sterile. The biopsy specimen was covered in villous projections consistent with acute and chronic inflammation. The final report was read as a fibrous walled cyst with a granulation tissue lining.

The patient did very well postoperatively and was treated with hydroxychloroquine for rheumatoid arthritis. Treatment was stopped three months later when she developed hemolysis without painful crisis. Her drop in hematocrit led to high output heart failure which became a major medical problem. In August 1987, she suffered a respiratory arrest secondary to sickle cell anemia and cardiomyopathy



Figure 1. Giant cystic lesion of the right dorsal hand with synovial thickening of wrists, MCP's, and PIP's.

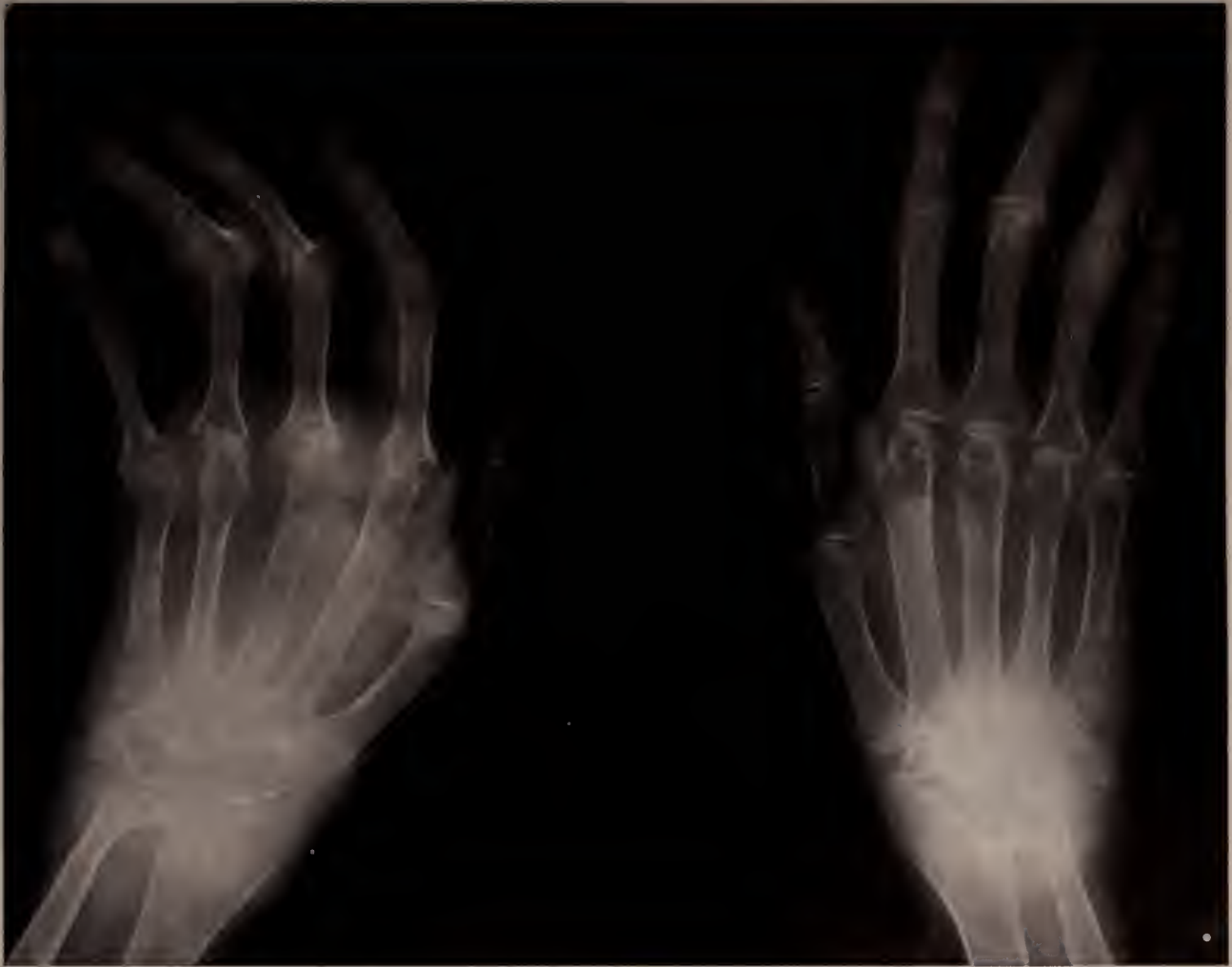


Figure 2. Severe erosive destruction of carpal bones, MCP's, and PIP's without radiographic evidence of tophi.

requiring intubation and artificial ventilation. She recovered after prolonged hospitalization. Rheumatoid arthritis remained active but no aggressive treatment was given because of her other medical problems except for pain control and neck support with cervical collar.

Comments

The patient reported here illustrates the clinical presentation of sickle cell disease (SCD) with rheumatoid arthritis (RA) with multisystem disease. Arthritis, pulmonary involvement, proteinuria, and anemia occur in both SCD and RA making the diagnosis and management of RA difficult.

In general, the arthritis associated with SCD is acute, non-inflammatory, self-limited, and related to painful crises.^{1,3} However, the presence of chronic joint involvement is also known to SCD and is most commonly due to the microvascular obstruction that

leads to avascular necrosis of the femoral head or to bony infarcts.² In 1977, Schumacher et al described chronic synovitis in two patients with SCD that resulted in destruction of the articular cartilage.⁴ Although one of those patients had a transiently positive rheumatoid factor and the other had an inflammatory synovitis, neither could meet the ARA criteria for RA. Casey and Cathcart reported a patient with sickle cell trait, hemarthrosis, and possible RA.⁶ This patient was seronegative without x-ray abnormality or extra-articular manifestations of RA. The patient presented here meets the ARA criteria for classic RA: morning stiffness, pain and swelling in multiple joints, symmetrical joint involvement, subcutaneous nodules, typical x-ray changes (including subluxation of the cervical spine), an inflammatory synovial fluid without crystals, and rheumatoid factor. The marked bony destruction seen in this patient, as well as the elevated serum uric

acid, suggested possible gouty arthritis. Gouty arthritis, including tophaceous gout, has been described in patients with SCD.⁷ The actual incidence of gout in SCD is difficult to determine since the clinical course of acute gout exactly parallels that of the non-inflammatory arthritis most often seen with SCD. Our diagnosis of RA rather than gout was weighted by the presence of atlantoaxial disease, the fulfillment of classic RA criteria, and the absence of urate crystals.

Other causes of arthritis in SCD include septic arthritis, osteomyelitis,⁸ hand-foot syndrome in children,⁹ a syndrome of arthritis occurring with leg ulcers,³ and as mentioned above, bone pain and/or necrosis due to obstructed blood flow.² None of these etiologies applied to the patient presented.

In addition to arthritis, our patient was found to have pulmonary abnormalities, proteinuria, and vision complaints. Ocular findings in SCD are most commonly due to retinal vessel obstruction and its sequelae,¹⁰ while the most common eye abnormality in RA is keratoconjunctivitis sicca. However, each may have dramatic eye lesions and even result in loss of vision.

Pulmonary involvement in RA may be pleural disease, vasculitis, pneumonitis, or interstitial fibrosis. In SCD, the most frequently reported problems are pneumonia, pulmonary infarctions, the acute chest syndrome, and pulmonary hypertension. From her history and medical records we found that our patient had been treated for pneumonia and has had previous chest x-rays interpreted as interstitial lung disease. She currently has pulmonary function tests showing restrictive disease. Therefore, her pulmonary involvement is quite probably a combination of SCD and RA manifestations.

Proteinuria, although usually not in the nephrotic range, may occur in RA or SCD. A secondary amyloidosis as seen in chronic inflammatory diseases may result in very elevated urine protein. Sick cell nephropathy has been associated with the nephrotic syndrome with the majority of these patients showing electron dense deposits within the glomeruli.¹¹ Another possible explanation for proteinuria in our patient could be the use of nonsteroidal anti-inflammatory agents.

There is no satisfactory drug regimen for this unfortunate patient. Her disease is aggressive, yet her other medical problems are contraindications for the use of remittive agents. Gold and pencillamine can not be considered because of the nephrotic range proteinuria and marked anemia. We consider the use of cytotoxic drugs too aggressive for a patient who needs a brisk reticulocytosis. We are also hes-

itant to use sulfasalazine in a patient with known nephrotic syndrome and blood dyscrasia. Intra-articular steroid injection was associated with recurrent sickle cell crises.^{3, 5} Non-steroidal anti-inflammatory drugs may contribute to her proteinuria as well as diminished renal function, especially since an increased renal sensitivity to prostaglandins has been reported in SCD patients.¹² Hydroxychloroquine was associated with episodes of hemolysis. Both her immunocompromised state from SCD and her severe osteoporosis are relative contraindications for steroid therapy. We are left with surgical intervention, in particular, those procedures which can be performed without intubating the patient. Our patient tolerated axillary block with tourniquet use very well. Postoperative treatment was limited to only pain control and supportive measures.

In summary, we report a patient with rheumatoid arthritis occurring in the presence of hemoglobin SS disease. We assume this to be coinciding disease rather than a causal relationship. We are beginning to see an older sickle cell population. As they age, we should expect to encounter more problems with diseases such as RA that increase with age. As seen with this patient, we may expect to see multisystem disease that will present a therapeutic dilemma. This patient illustrated the marginal benefit of therapeutic agents when faced with unacceptable side effects.

★★★

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THE PRESIDENT'S PAGE

DAVID R. STECKLER, M.D.

Some Final Impressions

THERE'S A SAYING that time flies when you are having fun, and although I can't say it's all been "fun," certainly time has passed quickly during my year as president of our association.

This will be my last "President's Page" and it seems appropriate to mark the occasion by first thanking all of you who have served in county and state society offices this year for your leadership on behalf of our profession. You made my job easier and I am grateful for your help. I also want to express special thanks to Charlie Mathews and the MSMA staff.

My travels around the country this year for meetings with you and others concerned about the future of health care have left me with a number of impressions which I would like to share with you in this final President's Page. These impressions concern the organization, responsibilities, and public image of our profession and all are interrelated.

From an organization standpoint I have become even more convinced that there must be one entity representing our profession in the political and socioeconomic arenas on the county, state and national levels and, name it what you want, that organization must be patterned after the county society, state society and the AMA if it is to be successful. Our members are not great enough to divide into different camps seeking different goals, and we must have a national organization that begins at the grassroots, namely the county medical society.

Next, I believe we must assume and demonstrate more responsibility for efficient utilization of the health care system in our country. With Medicare Part-B expenditures going up 15-20 percent a year; a \$150 billion federal budget deficit; 37 million people without health insurance coverage in a country spending more per capita for health care than any country in the world; and 89 percent of the American people indicating they see a need for fundamental change in the direction and structure of our health system — it doesn't take a genius to realize that our profession has a challenge and opportunity to address growing concerns about the efficiency of our health care system. Projects such as the AMA/Rand Corporation effort to develop parameters of care should also include information

(Continued on page 172)

Philanthropy in Mississippi

The Vision

A few years ago I found that over 50 doctors had donated to the Family Health Foundation of America (the philanthropic arm of the American Academy of Family Physicians) that year. With the need for money in our *own* state to support family practice endeavors being so great, some of us in the Mississippi Academy of Family Physicians decided to work on having our own Family Health Foundation of Mississippi. It has now become a reality, the only philanthropic organization in our state developed by a specialty.

Incorporation

Over the past year we have developed the articles of incorporation and the bylaws of the organization; have become a bona fide corporation; and now we are pleased to announce that we not only have our tax exempt status confirmed with the Internal Revenue Service (through being a 501(c)(3) corporation) but already have several thousand dollars contributed.

The Goals

The corporation is organized for educational and research purposes, specifically for establishing and administering programs of continuing medical education for licensed physicians in the medical specialty of family practice in the State of Mississippi; to support activities which encourage medical students to pursue family practice as their intended specialty in sufficient numbers to meet the family practice needs in the State of Mississippi; to support activities which enhance the educational preparation and training of prospective family physicians at the undergraduate and graduate levels; to support activities which maintain the educational excellence of family physicians throughout their practice experience; and to support research activities in family

practice which will ultimately result in improved patient care.

Network

We have now become a member of the foundation network. In so doing, 70% of all undesignated donated money comes back to us, as does 30% of physicians' gifts from all non-foundation network states by formula, and 15% of the corporate membership contributions are likewise distributed to us. ninety percent of the money returned to us will go for research and educational projects.

I am very excited about *our* foundation in *our* state. It is one of those things that will be a boon to practicing physicians, residents, medical students, and ultimately, our patients.

Thank God I'm a physician in this great philanthropic State of Mississippi.

JOE JOHNSTON, M.D.
Associate Editor

Medico-Legal Brief

Safe Harbors For The Stormy Medicare Seas

Generations of tax lawyers have guided their clients' transactions to "safe harbors," where they were legally protected from certain types of taxation. Now it appears that health care lawyers will have to identify some new "safe harbors" for their clients' transactions.

The Social Security Act has always provided criminal penalties for paying or receiving bribes, kickbacks or rebates for the referral of business under Medicare or Medicaid. The Medicare and Medicaid Patient and Program Protection Act of 1987 provided an alternative civil remedy for violations

MEDICO-LEGAL BRIEF/Continued

of the anti-kickback provisions. This alternate remedy is exclusion from the Medicare and Medicaid programs. Another provision of the Medicare and Medicaid Patient and Program Protection Act of 1987 requires the promulgation of regulations specifying those payment practices that will not be considered to be violations of the prohibition against kickbacks or rebates for referrals. In other words, those payment practices that are "safe" from prosecution, hence "safe harbors."

Proposed regulations were finally published in the *Federal Register* for January 23, 1989, and could be promulgated in final form by the time this article is published. The Department of Health and Human Services cautions that those who fail to fully comply with these regulations risk subjecting themselves to a civil or criminal enforcement action. HHS also warns that compliance with these regulations does not provide immunity from other Federal or State laws.

The Safe Harbors

The first "safe harbor" relates to investment interests. Dividends, interest, capital gains distributions, and similar payments from an investment obtained for fair market value are protected if the payment is from a business large enough to be required to register with the Federal Securities and Exchange Commission. At this point it might be well to note that in any prosecution the government must prove that the payment was for the referral of business under the Medicare or Medicaid programs. Simply receiving payments from an organization engaged in health care endeavors is not enough. The "safe harbor" here protects the physician who owns stock or securities in a large company whose products the physician prescribes for his Medicare patients. However, health care providers who have established limited partnerships, or other similar arrangements, with physicians who refer patients to the partnership, and who receive "dividends" based on the volume of referrals, will be at risk and outside the "safe harbor."

Payments made for space rental, equipment rental, personal services or management services may constitute kickbacks or rebates for the referral of patients. Arrangements for payments in excess of market value for the rental of space or equipment for a limited time, such as an hour, and solely for rendering care and treatment to a referred patient, may fall into that category. Likewise, arrangements to provide billing and collection services for providers

to whom patients have been referred, at rates in excess of market value, may also fall into that category. Therefore, similar "safe harbors" have been developed to embrace these similar payments. The "safe harbors" require (1) a written agreement signed by both parties for a term of at least one year; (2) the agreement must specify the premises, equipment or services covered; (3) if the use of the premises or equipment is for periodic intervals or the services are to be rendered periodically, the agreement must specify exactly the intervals and the exact rent or charge for each such interval; and (4) the rent or compensation paid must be based on fair market value and not on the volume of referrals.

Another "safe harbor" provided in the regulations provides protection for the sale of a practice by one practitioner to another when the sale is completed within one year from the date of the contract and the seller is not able to make referrals to the purchaser more than a year after the date of the contract to sell. This is primarily intended to eliminate those arrangements whereby hospitals ostensibly purchase the physician's practice but the physician continues to operate the practice, and presumably assures the hospital of continued referrals.

The foregoing does not reflect a complete picture of all of the regulations being proposed. Although there are other "safe harbors," and therefore other risks, which clearly should be examined closely, the foregoing are probably the most important for physicians.

Action Required

Like any good sea captain, physicians who may be participating in arrangements such as those described above should head for a "safe harbor." This means contacting your attorney and asking him or her to review your situation under these new regulations. Your attorney may recommend that you make substantial changes in how you handle referrals.

It should be remembered, however, that failure to be in a "safe harbor" does not necessarily mean that you are in violation of the prohibition against rebates for the referral of Medicare or Medicaid business. The attorneys in the Office of General Counsel will be glad to try to help you understand these regulations and the issues involved.

WILLIAM B. SMITH, J.D.
Senior Attorney
Health Law Division, AMA

121st Annual Session Highlights Socioeconomic, Legislative, Scientific Issues

Reimbursement issues, legislative and congressional considerations, professional ethics developments, quality assurance matters, trends in medical staff law, and scientific updates all are topics included in a packed agenda for MSMA's 121st Annual Session, which gets underway May 31. The program also includes policy-making meetings, scientific and technical exhibits, and elections of association officers, along with dozens of specialty society and fellowship activities.

Kicking off the five-day session are the annual meeting of the Young Physicians Section (YPS) and a gala President's Reception for members, their families, and guests. Both these events take place on Wednesday, May 31.

Dr. John Zapp of AMA's Washington office and Rep. Ed Buelow of Vicksburg, chairman of the Public Health and Welfare Committee of the Mississippi House of Representatives, are scheduled to speak at the Young Physicians Section on Wednesday afternoon. Dr. Tim Alford of Kosciusko, chairman of the YPS, will serve as moderator.

An atmosphere of family fun will prevail at the President's Reception, which this year is being held at Gulf Marine State Park. Plans include a delicious cocktail buffet, music, and tours of this exciting facility.

"Relative Value or Early Retirement" is the topic to be delivered by Dr. Robert McAfee of Portland, Maine, a member of the AMA Board of Trustees. Dr. McAfee will be a featured speaker at the opening session of the MSMA House of Delegates on Thursday morning. Also on the House agenda is an address by MSMA president David Steckler, M.D., and presentation of reports and resolutions.

Physician reimbursement issues will be discussed by Dr. Jim Bob Brame of Eldorado, Texas, a member of the Physician Payment Review Commission. Dr. Brame is featured speaker at the annual meeting of the Mississippi Foundation for Medical Care on Thursday afternoon.

Continuing medical education credit will be awarded for attendance at the scientific assembly, which will be held Friday, June 2. The Surgery Plenary Session will be conducted that morning in

conjunction with the American College of Surgeons, Mississippi Chapter. The Medicine Plenary Session will be held that afternoon. Programs for the scientific meetings are outlined on page 159.

Hospital administrators and members of hospital medical staffs face a number of issues in today's medical environment. The fifth annual meeting of the MSMA Hospital Medical Staff Section, set for Saturday morning, June 3, will provide discussions of those issues. A Jackson attorney, George Q. Evans, will discuss "Current Trends in Hospital Medical Staff Law." Dr. Margaret Wilson, project officer of the National Practitioner Data Bank, will speak on "The Health Care Quality Improvement Act" at a teleconference originating from Rockville, Maryland. Dr. Nancy Tatum's presentation on "The Hattiesburg Ethics Forum" will complete the HMSS program.

Among the many medical related groups which have scheduled concurrent meetings during the 121st

OFFICIAL CALL

To all members of the Mississippi
State Medical Association

The 121st Annual Session of the Mississippi State Medical Association is called to meet at Biloxi, Mississippi, on Wednesday, May 31, 1989, pursuant to Article V of the Constitution. The House of Delegates will be convened at the Royal d'Iberville Hotel at 9:00 a.m. on June 1.

The Scientific Assembly will meet June 2.

No member or guest will be permitted to participate in any aspect of the annual session until regularly registered.

DAVID R. STECKLER, M.D.
President

DON Q. MITCHELL, M.D.
Secretary-Treasurer

121st Annual Session

Summary of Activities

Wednesday, May 31

Young Physicians Section
President's Reception (causal dress)

Thursday, June 1

MSMA Member/Exhibitor Breakfast
House of Delegates
Miss. Foundation for Medical Care
Reference Committee Hearings
American Medical Society on Alcohol and
Other Drug Dependencies
Medical Alumni Reunions

Friday, June 2

MSMA Member/Exhibitor Breakfast
MSMA Past President's Breakfast
Surgery Plenary Session
Lunch with Exhibitors
Medicine Plenary Session
Miss. Ob-Gyn Society
Miss. Psychiatric Association
American College of Surgeons, Miss.
Chapter
Miss. Academy of Family Physicians
Miss. EENT Association
American Society of Internal Medicine
MSMA/MSMAA "Swamp Party" (causal
dress)

Saturday, June 3

Hospital Medical Staff Section
Investment/Retirement Planning Seminar
Miss. Anesthesiology Society
Miss. Pathology Society
Miss. Urological Society
Miss. Dermatology Society
American College of Emergency Physi-
cians, MS Chapter

Sunday, June 4

Continental Breakfast
Church Services
House of Delegates

ANNUAL SESSION/Continued

Annual Session are more than a dozen specialty societies and three medical alumni organizations — Millsaps, Tulane and the University of Mississippi.

Members, spouses and guests will have plenty of opportunities to enjoy special events along with the educational and business offerings. Tennis and golf tournaments are on the schedule, along with the popular deep-sea fishing rodeo. The annual MSMA/MSMA Auxiliary membership dinner this year will take a new approach — a "Swamp Party" theme, complete with decorations, music, Cajun buffet, and prizes to be awarded to the most appropriately dressed couple.

Concluding the busy five days will be the final session of the House of Delegates, set for Sunday morning following church services to be conducted in the hotel. Delegates will cast ballots for more than 75 nominees who have been selected by the Nominating Committee to fill vacancies in association offices. The 121st Annual Session will end with the installation of Dr. J. Edward Hill as 1989-90 MSMA president.

The MSMA Auxiliary is conducting its 66th Annual Session concurrently with the MSMA annual meeting. For more information, see the Auxiliary page in this issue.

Room reservations should be made with the Royal d'Iberville Hotel by returning the reservation cards mailed last month or by calling 388-6610.

Tennis, Golf, Fishing Events On Annual Session Calendar

Registration is underway for MSMA's tennis tournament, golf tournament, and deep sea fishing rodeo. All three events are on the schedule of activities for the 121st Annual Session in Biloxi.

Gulfport Racquet Club is the site for the tennis tournament, scheduled to begin at 1:00 p.m. on Saturday, June 3. The tournament is sponsored by Medical Assurance Company, which will provide tennis balls and refreshments. Trophies will be awarded in men's and women's doubles competition.

Golfers will prepare to tee off at 1:30 p.m. on Saturday. Trophies will be presented for low gross, low net, longest drive, and closest to pin. Early registration is recommended for this popular event.

Charter boats for deep sea fishing will depart from the Broadwater Marina at 7:00 a.m., Friday and Saturday, returning at 3:30 p.m. Registration fees will cover boat rental for the day, soft drinks and sandwiches. Prizes will be awarded for largest catch in Spanish mackerel, bonito and jackfish.

SCIENTIFIC PROGRAM

121st Annual Session

June 2, 1989

SURGERY PLENARY SESSION

(Participants: MSMA and American College of Surgeons, Miss. Chapter)

- 8:00 a.m. *"Musculoskeletal Magnetic Resonance Imaging"*
William E. Tew, MD, Jackson, MS
- "Trauma Helicopter: Use or Abuse"*
Robert C. Jorden, MD, Jackson, MS
- "Outpatient Management of Burns"*
John A. Griswold, MD, Jackson, MS
- "Recent Advances in Arthroscopic Surgery"*
F.H. Buddy Savoie, MD, Jackson, MS
- "Post-Operative Pain Management"*
J. Edwin Dodd, Jr., MD, Jackson, MS
- "Maine Medical Assessment Project — A Study in Small Area Variations"*
Robert E. McAfee, MD, Portland, ME

12:00 noon ACS Luncheon/Business Meeting/Scientific Program

- 1:30 p.m. *"A Blended Relative Value Scale: The American College of Surgeons Proposal"*
Richard J. Field, Jr., MD, Centreville, MS
- Panel Discussion: Reimbursement Issues*
- UMC Trauma Lecture*
- "Gunshot Wounds of the Head: What is the Prognosis?"*
Lynn Rogers, MD, UMC Resident, Jackson, MS
-

MEDICINE PLENARY SESSION

- 1:00 p.m. *"Lyme Disease"*
William Causey, MD, Jackson, MS
- "Epidemiology of Tick-Borne Diseases in Mississippi"*
F. Ed Thompson, MD, Jackson, MS
- "Gallstone Lithotripsy"*
Carol Scott-Conner, MD, Jackson, MS
- "Psychiatric Emergencies"*
Reb McMichael, MD, Jackson, MS

Youth Activities Added To Annual Session Program

The 1989 annual sessions of MSMA and MSMA Auxiliary will be events for the entire family, thanks to Gulfport Medical Auxiliary, which is coordinating special activities for young people age 8 and older.

Under the direction of Mrs. Michael Moses, the youth activities include an outing to play Goofy Golf on Thursday, a trip to Marine Life on Friday, and an excursion to Ship Island on Saturday. Transportation and adult supervision will be provided for the Thursday and Friday activities, but children participating in the Ship Island tour must be accompanied by an adult.

Tickets for Marine Life and Ship Island have been provided by local drug representatives.

In addition to these planned activities, young people will have access to a poolside hospitality room at the hotel, where auxiliary members will be serving refreshments.

Pre-registration is encouraged, since some of the events have limited participation. For information, call Kelly Moses at 896-8473.

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Investment/Retirement Planning Seminar on Annual Session Calendar

Physicians and spouses are invited to attend a seminar on "Investment and Retirement Planning," Saturday, June 3, from 1:00-2:30 p.m.

The seminar is sponsored by AMA Advisers, and is being held in conjunction with the MSMA Annual Session at the Royal d'Iberville Hotel.

Carl G. Gargula of Chicago, senior vice president of AMA Advisers, will present investment strategies and retirement planning techniques and will discuss a global economic outlook for the future. MSMA members and their spouses are encouraged to attend this informative session.

Program to Explore Issues Affecting Hospital Medical Staffs

Today's health care environment presents many challenges to hospital administrators and physicians who are members of hospital medical staffs. The fifth annual meeting of the MSMA Hospital Medical Staff Section (HMSS) features knowledgeable speakers who will discuss some of these challenges.

Implementation of the Health Care Quality Improvement Act will be discussed by Dr. Margaret Wilson, project officer of the National Practitioner Data Bank. This presentation will take place in a teleconference originating from Rockville, Maryland.

"Current Trends in Hospital Medical Staff Law" is the topic to be addressed by a Jackson attorney, George Q. Evans. Dr. Nancy Tatum of Petal will discuss development of "The Hattiesburg Ethics Forum."

Hospital administrators and members of medical staffs are encouraged to attend this informative session on Saturday, June 3, beginning at 8:30 a.m. at the Royal d'Iberville Hotel. For more information, contact the MSMA headquarters office.

**James Grant Thompson
Memorial Lecture**

Friday, June 2

11:00 a.m.

*"Maine Medical Assessment Project —
A Study in Small Area Variations"*

Robert E. McAfee, MD, Portland, ME

Mississippi State Medical Association Auxiliary

Convention 1989

Wednesday, May 31

12:00 noon Registration/Hospitality
6:00- MSMA President's Reception
9:00 p.m. "casual dress"

Thursday, June 1

8:00 a.m. Registration/Hospitality Center
9:00 MSMA House of Delegates
10:00 Preconvention Board Meeting
2:00- Reception at Diamond Head
4:00 p.m. "Home of Drs. Ellis and Nina Moffitt"
6:00 Tulane Alumni
6:30 Millsaps Alumni
7:00 Ole Miss Alumni

Friday, June 2

8:00 a.m. Registration/Hospitality Center
8:45 Auxiliary House of Delegates
12:00 noon Luncheon
2:30 p.m. Postconvention Board Meeting
6:30 MSMA/MSMAA "Swamp Party"
 and Silent Auction

Saturday, June 3

8:30 a.m. Past President's Breakfast
1:00 p.m. Investment/Retirement Planning Seminar for
 Physicians and Spouses

Sunday, June 4

7:00 a.m. Continental Breakfast
8:00 a.m. Church Services
9:00 MSMA House of Delegates



Faculty Appointments At Medical Center

Four have been named in appointments to the Schools of Medicine and Dentistry and centerwide faculty at the University of Mississippi Medical Center.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs, announced the appointments following approval by the Board of Trustees of State Institutions of Higher Learning.

Dr. Benjamin F. Banahan, Jr., was named associate professor of family medicine in the medical school; Dr. Allen M. Metcalf, Jr. was named assistant professor of restorative dentistry in the dental school; and centerwide, Dr. William A. Rock, Jr., was named professor of pathology and Dr. Leonard I. Boral, associate professor of pathology.

Dr. Banahan attended Millsaps College and earned his medical certificate in 1955 at Ole Miss. He earned the M.D. in 1957 at Tulane University and took his internship and residency at the University of Mississippi Medical Center. He was in private practice in Jackson from 1957-1973, and chief medical consultant for the State of Mississippi Disability De-

termination Unit and member of the Medical Center's clinical faculty for 13 years, until 1973, when he was appointed assistant professor of family medicine. In 1977, he was promoted to associate professor of family medicine and vice chairman and director of the family practice residency program. He has been a member of the medical staff at a number of hospitals in Mississippi and at Huntsville, Ala. He had been associate professor of primary medical care at the University of Alabama in Huntsville since 1979.

Dr. Metcalf earned the B.S. in 1965 at Arkansas State University and the D.D.S. in 1973 at the University of Tennessee College of Dentistry. He took his residency at the Veterans Administration Medical Center in Memphis, where in 1986, he earned the certificate in prosthodontics. He has practiced dentistry in Cherokee Village, Ark. and Memphis, Tenn., for a total of 16 years and has been assistant professor of fixed prosthodontics at the University of Tennessee in Memphis since 1980.

Dr. Boral earned the B.S. in 1967 at Muhlenberg College and the M.D. in 1971 at the University of Pennsylvania. He took his internship and residencies at the Upstate Medical Center of New York, where he was chief resident in anatomical pathology, and at the New York University Medical Center. He was a pathologist, associate chief of laboratory medicine, director of blood bank and medical cytology advisor for the Wilford Hall Medical Center at Lackland Air Force Base in San Antonio, Tex. from 1976-1978, when he was named pathologist for the West Florida Hospital in Pensacola, Fla. Since 1979, he has been medical director for the Central Indiana Regional Blood Center in Indianapolis, Ind., and consultant to a number of hospitals in the state.

Dr. Rock earned the B.S. in 1964 and the M.D. in 1969 at Louisiana State University. He took his internship and residency at the Charity Hospital in New Orleans. He was appointed assistant professor of pathology at the LSU Medical Center in 1973 and has been director of the hematology section of the Department of Pathology at Charity Hospital since 1975. A member of the LSU School of Graduate Studies since 1980, he was promoted to associate professor of pathology in 1981. He was a pathologist at the Veterans Administration Hospital in New Orleans from 1973-1975, and is consultant and member of the courtesy staff for a number of the city's hospitals.

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Brief Summary

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Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg b.i.d. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H₂-receptor antagonists.

Precautions: General — 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests — False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions — No interactions have been observed between Axid and theophylline, chlorazepate, lorazepam, idocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,300 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility — A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterocryptin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 350 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C — Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spinal bifida, hydrosalpinx, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers — Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use — Safety and effectiveness in children have not been established.

Use in Elderly Patients — Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, sweating (11% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events were also reported, it was not possible to determine whether these were caused by nizatidine.

Hepatic — Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients, was possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular — In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS — Rare cases of reversible mental confusion have been reported.

Endocrine — Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic — Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H₂-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumentary — Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity — As with other H₂-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H₂-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other — Hyperuricemia unassociated with gout or nephropathy was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms — There is little clinical experience with overdose of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg, respectively.

Treatment — To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the Physicians' Desk Reference (PDR). In managing overdose, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

PV 2096 AMP

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Additional information available to the profession on request.

NEW MEMBERS

BAKERSMITH, DARLA I., Jackson. Born Valpariso, FL, June 4, 1953; M.D., Tulane University School of Medicine, New Orleans, 1979; one year internship, Portsmouth Naval Hospital, Portsmouth, VA; internal medicine residency, same, 1980-82; cardiology fellowship, San Diego Naval Hospital, San Diego, CA, 1982-84; elected by Central Medical Society.

ERUCHALU, O. N., Hattiesburg. Born London, England, Dec. 18, 1953; M.D., College of Medicine University of Ibadan, Ibadan, Nigeria, 1978; interned one year, general surgery residency (1983-87) and gastroenterology fellowship, Harlem Hospital, New York, NY; elected by South Mississippi Medical Society.

PHYSICIANS NEEDED

Physicians (especially specialists such as ophthalmologists, pediatricians, orthopedists, neurologists, etc.) interested in performing consultative evaluations (according to Social Security guidelines) should contact the Medical Relations Office. WATS 1-800-962-2230; Jackson, 922-6811; Martina Mayfield (ext. 2276) or Becky Ruggles (ext. 2300).



DISABILITY DETERMINATION SERVICES
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GREEN, VIRGINIA A., Jackson. Born Montgomery, AL, Jan. 26, 1950; M.D., University of Alabama School of Medicine, Montgomery, 1975; interned and pediatric residency, University of Cincinnati Children's Hospital, Cincinnati, OH, 1975-78; elected by Central Medical Society.

HOLLAND, CHARLES MITCHELL, Brookhaven. Born New Orleans, Nov. 12, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and pediatric residency, University Medical Center, Jackson, 1985-88; elected by South Central Medical Society.

JOHNSON, KURT DARWIN, Pearl. Born Rockford, IL, March 27, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and family practice residency, University of South Alabama Medical Center, Mobile, 1985-88; elected by Central Medical Society.

KEBERT, KENT L., Macon. Born Jackson, MS, Oct. 3, 1957; M.D., University of Mississippi School of Medicine, Jackson, 1983; interned, one year, Baptist Memorial Hospital, Memphis; ophthalmology residency, University of Tennessee Center for the Health Sciences, Memphis, 1984-87; elected by South Central Medical Society.

ODOM, PAUL L., Water Valley. Born Jackson, MS, Aug. 18, 1934; M.D., University of Mississippi School of Medicine, Jackson, 1963; interned, one year, Mobile General Hospital, Mobile, AL, 1963-64; elected by North Mississippi Medical Society.

PATE, KENNETH RAY, Whitfield. Born Jackson, MS, May 28, 1958; M.D., University of Mississippi School of Medicine, Jackson 1987; interned, one year, Baptist Memorial Hospital, Memphis, 1987-88; elected by Central Medical Society.

RHODES, ROBERT SANDER, Jackson. Born Jackson Heights, NY, Feb. 21, 1942; M.D., State University of New York Upstate College of Medicine, Syracuse, 1967; interned, University Hospital of Cleveland, Cleveland, OH, one year; residency in surgery, same, 1968-69 and 1971-73, and research fellowship 1969-71; elected by Central Medical Society.

TRIPLETT, LARAMIE C., Madison. Born Macon, MS, June 7, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and family practice residency, University Hospital, Jackson, 1985-88; elected by Central Medical Society.

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PERSONALS

BRUCE ATKINSON of Jackson has been elected to fellowship in the American College of Cardiology.

ERIC BAUMGARTNER of Tupelo was speaker at a meeting of Alcorn County school representatives concerning AIDS education in the fifth and sixth grades.

OWEN EVANS of UMC spoke at the plenary session of the American Academy of Pediatrics in New Orleans.

JAMES GRIFFITH of UMC presented psychiatry grand rounds at Massachusetts General Hospital in Boston.

C. E. GUICE of Hattiesburg recently was named a fellow of the American Academy of Facial Plastic and Reconstructive Surgery.

JAMES E. HALL of Brookhaven has been named to the University of Mississippi Alumni Association Board of Directors.

HARRIET HAMPTON of UMC spoke on "Gynecological Problems in the Pediatric Patient" at a continuing education seminar at Singing River Hospital in Pascagoula.

THOMAS R. HOWELL of Laurel has been recertified by the American Board of Surgery.

HERBERT LANGFORD of UMC was guest speaker at the Canadian Consensus Conference in Halifax, Nova Scotia.

RAMON MCGEHEE of UMC spoke on "Evaluating the Abnormal Pap Smear" at a continuing education seminar at Pascagoula's Singing River Hospital.

G. RODNEY MEEKS of UMC spoke on "Urinary Incontinence" at a continuing education program at Singing River Hospital in Pascagoula.

ANDREW PARENT of UMC presented a paper at the Southern Society of Neurosurgery meeting in Point Clear, Alabama.

SESHADRI RAJU of UMC was speaker at a meeting of the Society for Clinical Vascular Surgery in Boca Raton, Florida.

RANDALL ROSS of Hattiesburg spoke on "Preventing Kidney Disease" at a public education seminar at Forrest General Hospital.

DAVID RUSSELL of Meridian spoke on heart disease at a meeting of the Meridian Kiwanis Club

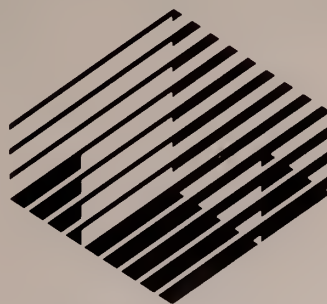
STEPHEN SENTER of Belmont has been elected president of Northeast Mississippi Medical Society.

ALEXANDRE SOLOMON of Greenville has been certified as an instructor in Advance Trauma Life Support.

DAVID THOMAS of UMC was a site visitor at the Louisiana State Veterans Nursing Home in Jacksonville, Louisiana.

PAUL WARRINGTON of Cleveland has been recertified by the American Academy of Family Physicians.

CORRECTION: The April issue contained an error. The item should have read, "ELDON BOLTON of Biloxi has returned to active practice, and announces that JAMES P. MARTIN has associated with Bolton-Middleton Clinic for the practice of internal medicine and nephrology."



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THE JOURNAL welcomes manuscripts which should be submitted to the Editors at 735 Riverside Drive, Jackson, MS 39216, in original and at least one duplicate copy. They must be typewritten double spaced on 8½ by 11-inch white paper. **Brief manuscripts (about 2,500 words or 8 pages) will be given preference over longer articles.**

The author is responsible for all statements made in his work, including changes made by the manuscript editor. Manuscripts are received with the understanding that they are not under simultaneous consideration by any other publication and have not been previously published. All manuscripts will be acknowledged, and while those rejected are generally returned to the author, the JOURNAL is not responsible in event of loss. Manuscripts accepted for publication become the property of the JOURNAL and are copyrighted by the association when published. They may not be published elsewhere without written release and permission from both the JOURNAL and the author.

All copy must be double spaced, including legends, footnotes, and references. Generous margins at the top, bottom, and on both sides of the page should be allowed. Each page after the title page should be consecutively numbered and carry a running head identifying the paper and author.

Titles should be short, specific, and clear. Ordinarily, a title should not exceed 80 characters, including punctuation.

References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list. Textbooks, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the *Index Medicus*, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

Manuscripts accepted for publication are subject to copy editing. Authors will receive galley proof prior to publication. Galley proof is only for correction of errors, and text changes

may not be made. The galley proof should be returned by the author within 48 hours from receipt, and no further changes may be made.

Illustrations consist of all material which cannot be set into type such as photographs, line drawings, graphs, charts, and tracings. Illustrations should be submitted separately from text copy. Figures and drawings should be professionally prepared with black ink on white paper. Photographs should be of high resolution, unmounted, untrimmed, glossy prints. Each must be clearly identified. No charges are made to authors for up to four illustration engravings. More are not permitted unless voted on by two editors and extra costs must be absorbed by the author.

Illustrations must be numbered and cited in the text. Legends, not exceeding 40 words and preferably shorter, must accompany each illustration, typed double spaced on separate sheets. The following information should appear on a gummed label affixed to the back of each illustration: Figure number, manuscript title, author's name, and arrow indicating top of the illustration.

In photographs in which there is any possibility of personal identification, an acceptable legal release must accompany the material.

A thesis summary of 75 to 100 words must accompany each manuscript.

Reprints may be obtained at cost plus shipping charges from the association and **should be ordered prior to publication.** The JOURNAL reserves the right to decline any manuscript. Authors should avoid placing subheads in the text, and the Editors reserve the prerogative of writing and inserting subheads according to JOURNAL style. — *The Editors.*

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Mississippi State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by all authors of the submission will necessitate delay in review of the manuscript. — *The Editors.*



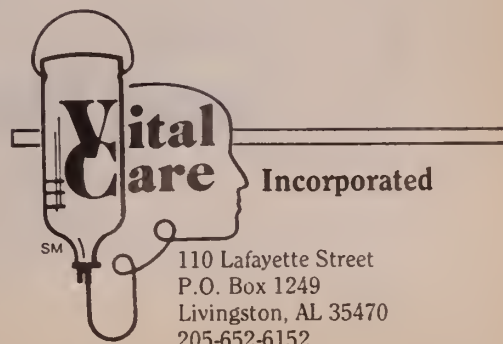
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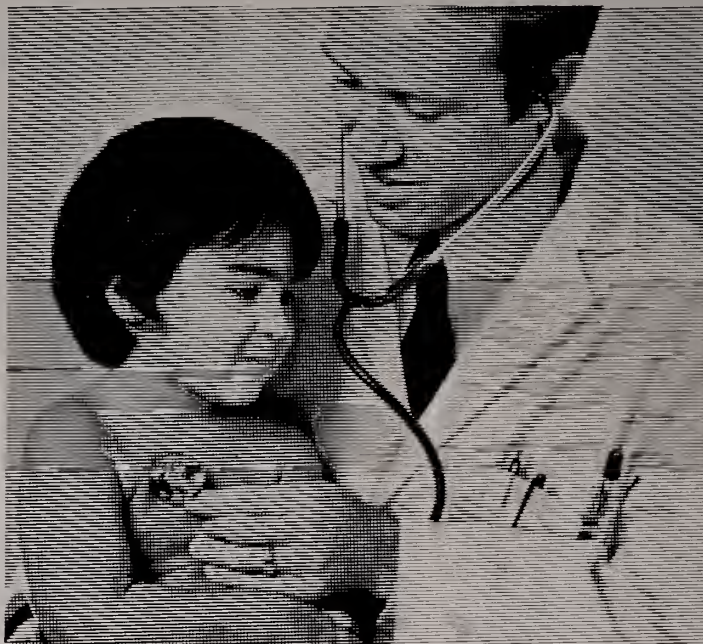
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RECOLLECTIONS

"Two of the most difficult duties of the president of our state medical association are writing his first and last pages for our JOURNAL. In his first message to his colleagues, the freshman president is a little apprehensive about what he will say. After a year of intensive activity, he finds that there just isn't enough space on the page to say what he has in mind." Those were the opening sentences of Dr. Joseph Rogers' last president's page in the JOURNAL's May 1969 issue.

"Medicine and medical organization are no longer arts, sciences and structures of simplicity; they are unbelievably complex and becoming more so," he added. "We physicians must now reckon with the pressures of society, programs of the politicians, the cry of the consumer, and the economic juggler-

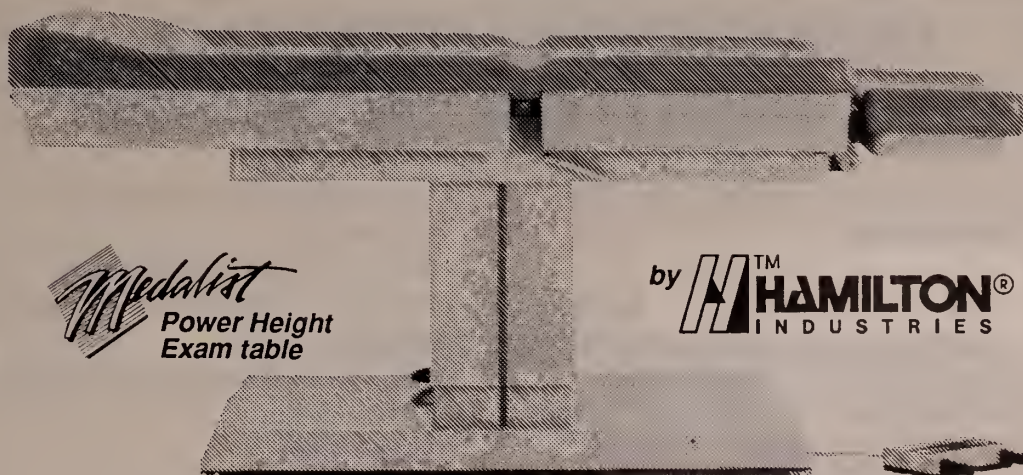
naut of insurance, prepayment and government. It is a time to put our best foot forward, to assign our best leaders to the tasks, and to give our strongest support."

Scientific articles in that issue included "Tuberculous Meningitis: A Study of General Hospital Patients in Mississippi" by Drs. John Ricks and Fred Allison, Jr. and "Gram-Negative Septicemia and Endotoxin Shock: A Rationale of Management" by Drs. W. L. Weems and J. E. Aldridge.

Ten years ago the May issue of the JOURNAL included a summary of activity in the 1979 Regular Session of the Mississippi Legislature, which included passage of a bill creating a new Health Care Commission. Legislators also took action to provide for insurance coverage for emergency transportation of newborns and to establish a statewide newborn screening program for hypothyroidism and PKU. The state legislature also passed bills providing for generic drug substitution and requiring insurance reimbursement for certain nurse practitioners.

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PRESIDENT'S PAGE

(Continued from page 154)

about cost of care alternatives and should receive our full support and participation.

Finally, there is the public image of our profession. Unfortunately, there is a growing perception that we are motivated more by pocketbook issues rather than patient concerns. This perception can't be changed by implementing an expensive public relations program. It must be changed by our individual commitment to the care of patients regardless of their ability to pay. The Senior Care program we implemented this year can demonstrate this commitment. Have you joined? Participation in the Medicaid Program can demonstrate this commitment. Do you accept Medicaid patients? Unfortunately many of us rely on our colleagues to participate in such programs as Senior Care and Medicaid, while at the same time we worry about the image of our profession.

Again, I thank you for the opportunity to serve as president of our professional organization. I hope to see each of you at our upcoming annual meeting.

Review A Book

The following books have been received by the JOURNAL MSMA. Members of MSMA interested in reviewing one of these volumes should address requests to the Editor. After submitting a review for publication, you may keep the book for your personal library.

Disease and Distinctiveness in the American South. Todd L. Savitt and James Harvey Young. University of Tennessee Press, 1988.

Health Risks and the Press: Perspectives on Media Coverage of Risk Assessment and Health. Mike Moore, Editor. The Media Institute, Washington, DC and The American Medical Association, Chicago, IL. \$12.95. 1989.

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CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, (3) patients with hypotension (less than 90 mm Hg systolic), (4) patients who have demonstrated hypersensitivity to the drug, and (5) patients with acute myocardial infarction and pulmonary congestion documented by x-ray on admission.

WARNINGS

- Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (nine of 2,111 patients or 0.43%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
- Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). An acute study of oral diltiazem in patients with impaired ventricular function (ejection fraction 24% ± 6%) showed improvement in indices of ventricular function without significant decrease in contractile function (dp/dt). Experience with the use of CARDIZEM (diltiazem hydrochloride) in combination with beta-blockers in patients with impaired ventricular function is limited. Caution should be exercised when using this combination.
- Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
- Acute Hepatic Injury.** Mild elevations of transaminases with and without concomitant elevation in alkaline phosphatase and bilirubin have been observed in clinical studies. Such elevations were usually transient and frequently resolved even with continued diltiazem treatment. In rare instances, significant elevations in enzymes such as alkaline phosphatase, LDH, SGOT, SGPT, and other phenomena consistent with acute hepatic injury have been noted. These reactions tended to occur early after therapy initiation (1 to 8 weeks) and have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in some cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Dermatological events (see ADVERSE REACTIONS section) may be transient and may disappear despite continued use of CARDIZEM. However, skin eruptions progressing to erythema multiforme and/or exfoliative dermatitis have also been infrequently reported. Should a dermatologic reaction persist, the drug should be discontinued.

Drug Interaction. Due to the potential for additive effects, caution and careful titration are warranted in patients receiving CARDIZEM concomitantly with any agents known to affect cardiac contractility and/or conduction. (See WARNINGS.) Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

As with all drugs, care should be exercised when treating patients with multiple medications. CARDIZEM undergoes biotransformation by cytochrome P-450 mixed function oxidase. Coadministration of CARDIZEM with other agents which follow the same route of biotransformation may result in the competitive inhibition of metabolism. Doses of similarly metabolized drugs, particularly those of low therapeutic ratio or in patients with renal and/or hepatic impairment,

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may require adjustment when starting or stopping concomitantly administered CARDIZEM to maintain optimum therapeutic blood levels.

Beta-blockers: Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated, but available data are not sufficient to predict the effects of concomitant treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities.

Administration of CARDIZEM (diltiazem hydrochloride) concomitantly with propranolol in five normal volunteers resulted in increased propranolol levels in all subjects and bioavailability of propranolol was increased approximately 50%. If combination therapy is initiated or withdrawn in conjunction with propranolol, an adjustment in the propranolol dose may be warranted. (See WARNINGS.)

Cimetidine: A study in six healthy volunteers has shown a significant increase in peak diltiazem plasma levels (58%) and area-under-the-curve (53%) after a 1-week course of cimetidine at 1,200 mg per day and diltiazem 60 mg per day. Ranitidine produced smaller, nonsignificant increases. The effect may be mediated by cimetidine's known inhibition of hepatic cytochrome P-450, the enzyme system probably responsible for the first-pass metabolism of diltiazem. Patients currently receiving diltiazem therapy should be carefully monitored for a change in pharmacological effect when initiating and discontinuing therapy with cimetidine. An adjustment in the diltiazem dose may be warranted.

Digitalis: Administration of CARDIZEM with digoxin in 24 healthy male subjects increased plasma digoxin concentrations approximately 20%. Another investigator found no increase in digoxin levels in 12 patients with coronary artery disease. Since there have been conflicting results regarding the effect of digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing CARDIZEM therapy to avoid possible over- or under-digitalization. (See WARNINGS.)

Anesthetics: The depression of cardiac contractility, conductivity, and automaticity as well as the vascular dilation associated with anesthetics may be potentiated by calcium channel blockers. When used concomitantly, anesthetics and calcium blockers should be titrated carefully.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in *in vitro* bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded from these studies.

The adverse events described below represent events observed in clinical studies of hypertensive patients receiving either CARDIZEM Tablets or CARDIZEM SR Capsules as well as experiences observed in studies of angina and during marketing. The most common events in hypertension studies are shown in a table with rates in placebo patients shown for comparison. Less common events are listed by body system; these include any adverse reactions seen in angina studies that were not observed in hypertension studies. In all hypertensive patients studied (over 900), the most common adverse events were edema (9%), headache (8%), dizziness (6%), asthenia (5%), sinus bradycardia (3%), flushing (3%), and 1° AV block (3%). Only edema and perhaps bradycardia and dizziness were dose related. The most common events observed in clinical studies (over 2,100 patients) of angina patients and hypertensive patients receiving CARDIZEM Tablets or CARDIZEM SR Capsules were (ie, greater than 1%) edema (5.4%), headache (4.5%), dizziness (3.4%), asthenia (2.8%), first-degree AV block (1.8%), flushing (1.7%), nausea (1.6%), bradycardia (1.5%), and rash (1.5%).

DOUBLE BLIND PLACEBO CONTROLLED HYPERTENSION TRIALS		
Adverse	Diltiazem N=315 # pts (%)	Placebo N=211 # pts (%)
headache	38 (12%)	17 (8%)
AV block first degree	24 (7.6%)	4 (1.9%)
dizziness	22 (7%)	6 (2.8%)
edema	19 (6%)	2 (0.9%)
bradycardia	19 (6%)	3 (1.4%)
ECG abnormality	13 (4.1%)	3 (1.4%)
asthenia	10 (3.2%)	1 (0.5%)
constipation	5 (1.6%)	2 (0.9%)
dyspepsia	4 (1.3%)	1 (0.5%)
nausea	4 (1.3%)	2 (0.9%)
palpitations	4 (1.3%)	2 (0.9%)
polyuria	4 (1.3%)	2 (0.9%)
somnolence	4 (1.3%)	—
alk phos increase	3 (1%)	1 (0.5%)
hypotension	3 (1%)	1 (0.5%)
insomnia	3 (1%)	1 (0.5%)
rash	3 (1%)	1 (0.5%)
AV block second degree	2 (0.6%)	—

In addition, the following events were reported infrequently (less than 1%) or have been observed in angina trials. In many cases, the relation to drug is uncertain.

Cardiovascular: Angina, arrhythmia, bundle branch block, tachycardia, ventricular extrasystoles, congestive heart failure, syncope.

Nervous System: Amnesia, depression, gait abnormality, hallucinations, nervousness, paresthesia, personality change, tremor, abnormal dreams.

Gastrointestinal: Anorexia, diarrhea, dysgeusia, mild elevations of SGOT, SGPT, and LDH (see hepatic warnings), vomiting, weight increase, thirst.

Dermatological: Patechiae, pruritus, photosensitivity, urticaria.

Other: Amblyopia, CPK increase, dyspnea, epistaxis, eye irritation, hyperglycemia, sexual difficulties, nasal congestion, nocturia, osteoarthral pain, impotence, dry mouth.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. Definitive cause and effect relationship between these events and CARDIZEM therapy cannot yet be established.

Issued 1/89

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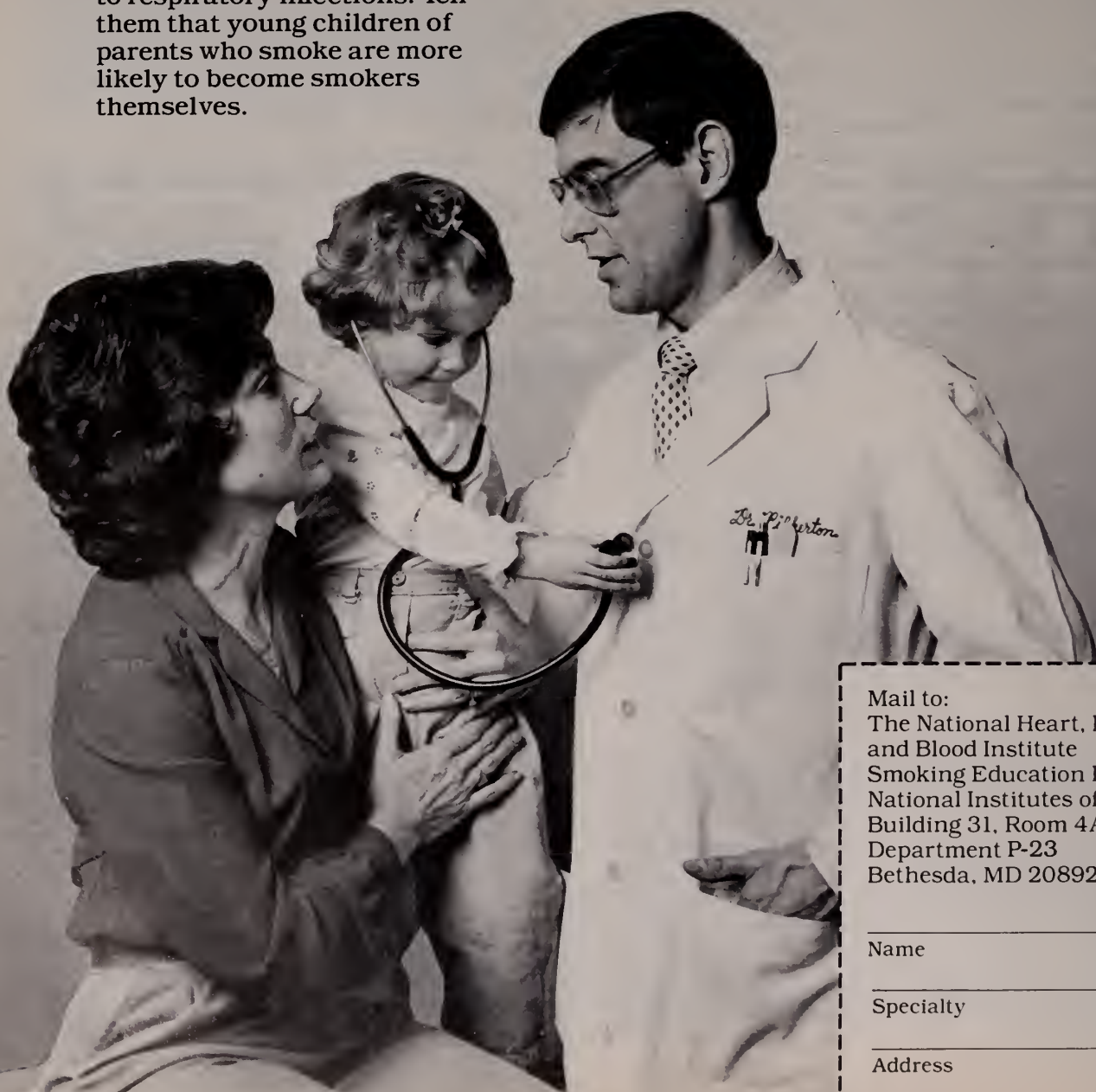
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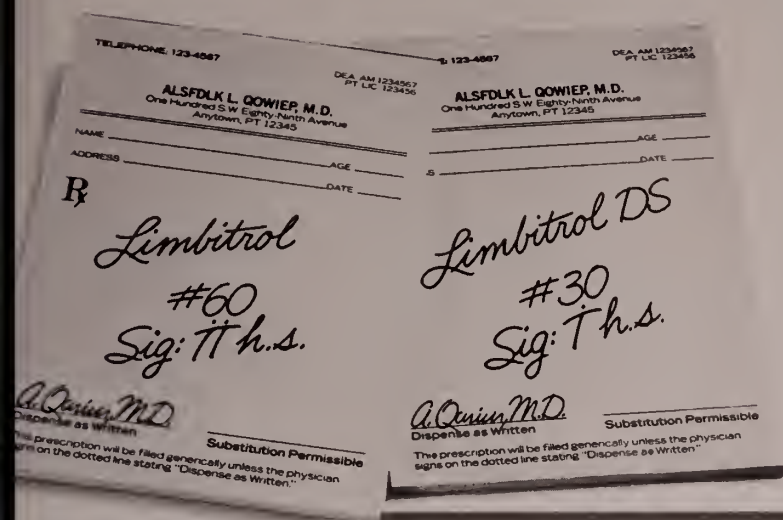
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Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (see Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: **Cardiovascular:** Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. **Psychiatric:** Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. **Neurologic:** Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. **Anticholinergic:** Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. **Allergic:** Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. **Hematologic:** Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. **Endocrine:** Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Other:** Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

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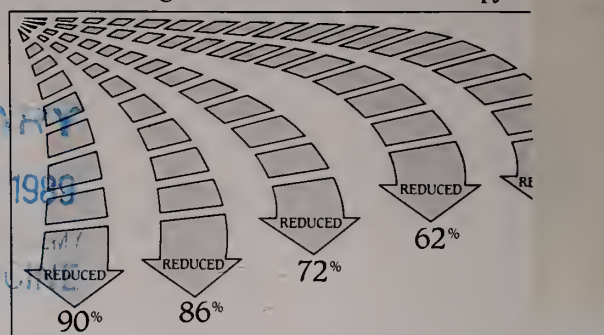
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JOURNAL

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J. Edward Hill, M.D. — 1989-90 MSMA President

Why Do Physicians From Around The U.S. Send Kids To One Atlanta Hospital For Old-Fashioned Care?

At the Ridgeview Institute, "progress" in health-care delivery has passed us by. Our highly-qualified, experienced physicians — not MBA's or CPA's — still call the shots. Because Ridgeview is still non-profit, still not owned by any chain.

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OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

JUNE 1989

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NUMBER 6

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The health center provides two levels of care. Both levels require physician referral.

The acute care division incorporates all general physical therapy modalities and includes closely monitored exercise programs for stroke and cardiac patients. The fitness division offers advanced individual and group classes utilizing a variety of high speed, high intensity exercise equipment. The area includes an indoor track, swimming pool, therapeutic pool and all purpose court.

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NEWSLETTER

June 1989

Dear Doctor:

New standards have been established by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) to evaluate performance of HMOs and other entities that offer managed care services. The standards were outlined in the Commission's Managed Care Standards Manual, and become effective for on-site surveys of these organizations August 1.

The new standards emphasize the importance of gathering patient care information and using this information to stimulate quality improvement. Fundamental to the system is the collection of selected data on patient outcomes, provider performance and resource consumption, and the communication of these results to organizational leaders. The new standards also underline the need to solicit feedback on quality from their members and to routinely evaluate patient access to physicians, according to a statement from JCAHO.

The JCAHO supports the availability of health care quality-related information in the public domain, provided that the information is accurate, relevant to the public interest, validated to the extent feasible, appropriately interpreted and intended for use in a constructive context, says a position paper issued by the Commission's Board. The statement came in response to increased public debate on this issue.

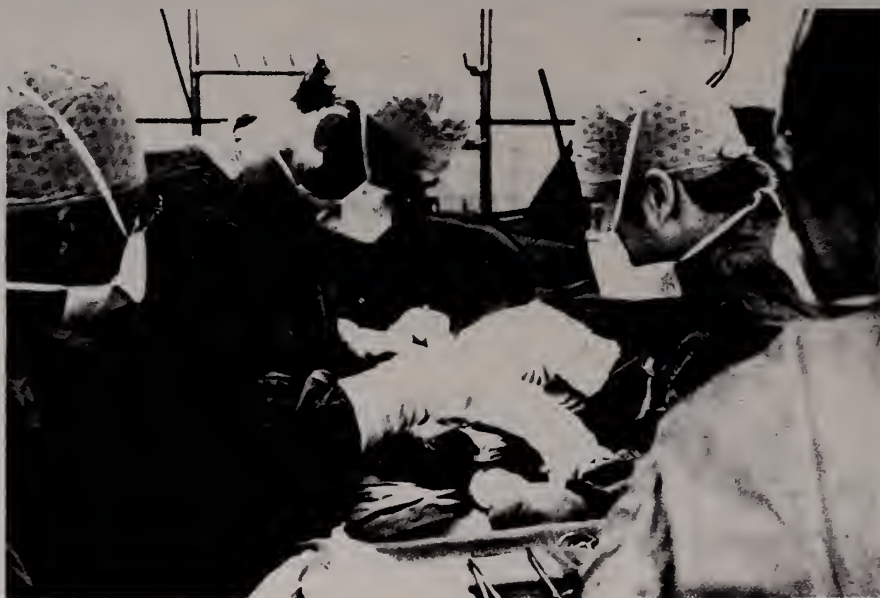
Critikon, Inc. has introduced the first intravenous catheter that helps protect health care workers from accidental needlesticks and the resulting risk of contracting infectious diseases such as AIDS and hepatitis. The device introduces a protective needle shield that locks into place over the introducer needle as it is withdrawn from the catheter. The point is then safely and permanently encased. More than a million accidental needlesticks occur each year.

Sincerely,



Patsy Silver
Managing Editor

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DATELINE

Fear of Antitrust Suits Hampers Peer Review

Chicago, IL - "Physicians are increasingly losing whatever ability they ever had to police themselves," said Dr. James S. Todd, senior deputy executive vice president for the AMA. He made the statement at a May meeting sponsored by the AMA and the National Health Lawyers Association, and cited a 1987 Texas survey of physicians that revealed 66% of respondents feared antitrust litigation resulting from involvement in peer review.

AMA and EPA Views On Medical Waste

Chicago, IL - The AMA has told the Environmental Protection Agency (EPA) that it is important to view medical waste in its proper perspective in order to balance the benefits to the environment against the staggering costs of micro-waste management. The statement came in response to the EPA's regulations implementing the Medical Waste Tracking Act, which applies to waste from physicians' offices, clinics and labs.

Drug Substitution Opinion Survey Results

Chicago, IL - As many as 1.2 million patients nationwide may have been adversely affected because of drugs substituted for the prescriptions written by their physicians, a survey of physicians indicates. The survey, reported in the May 12 AM News, notes the results are based on opinion rather than documented evidence. The AMA undertook the study because of physician concerns about drug substitution, particularly for outpatients.

Patient Education Award Announced

Kansas City, MO - Entries are now being solicited for the 1989 Patient Care Awards for Excellence in Patient Education. The three winners will be honored at the 11th Annual Conference on Patient Education. For information on criteria, contact Barbara Widmar, American Academy of Family Physicians, 8880 Ward Parkway, Kansas City, MO 64114; (800) 274-2237. Self-nominations are encouraged.

Auxiliary Seeks Volunteers For Support Network

Jackson, MS - Reminder: Volunteers are needed to participate in the MSMA Auxiliary "Sharing Support Network," a program to help medical families cope with the stress of a malpractice suit. Success of the program requires the participation of physicians' spouses who are willing to share their own experiences. Contact the MSMA Auxiliary today to volunteer for this worthwhile program.

There is strength in numbers. (And our numbers are growing.)



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ORIGINAL PAPERS

Transcranial Doppler Arteriography — A Technical Note

ROBERT R. SMITH, M.D.*

MICHAEL GRAEBER, M.D.†

ROBIN BROWN, B.S.R.N.*

and RENEE WILSON, B.S.*

Jackson, Mississippi

SINCE ITS INTRODUCTION in the 1960s, ultrasonic velocimetry has been adapted rapidly to the analysis of the extracranial vessels. Early efforts to extend the Doppler principle to the study of intracranial vasculature were initially unsuccessful because of the sound deflection by the calvarium. White and co-workers noted that, of the three layers of bone, the diploe produced attenuation and scattering of ultrasound because of the presence of multiple bony spicules.¹ The temporal bone was found to be composed of several thin areas without thick diploic regions through which ultrasound could pass. In Grolimund's experiments, 80% of the mean transmitted power was lost through the skull.² Nevertheless, in 1982 Aaslid and co-workers utilized a 2 MHz probe to make Doppler ultrasound recordings of human basal cerebral arteries in 1982. In 50 subjects studied, bilateral middle cerebral artery (MCA) flow velocities were measured in all. Crude flow maps of the vessels were later constructed using the 5 mm range gate. Quite recently, employing a stereotaxic headholder and probe assembly, three-dimensional ultrasonic arteriographic maps have become possible. A computer is used to post-process and display the data obtained from 1 mm incremental samples along the cranial base. The device

Transcranial Doppler (TCD) evaluation of the intracranial vessels was performed in sixty-six patients, 51 of whom received conventional angiography either prior to or subsequent to the ultrasonic arteriogram. Of the 14 patients evaluated for arteriovenous malformations (AVMs), TCD indicated the existence of the AVM in 10 cases. Of those 10 cases, 9 correlated with angiography. Twenty-one patients with aneurysms were evaluated with TCD and only 2 were detected. Twenty-three patients suspected of having ischemic disease were evaluated with TCD, which indicated the presence of stenosis in 21 patients. Twenty of those patients received conventional angiography, with 18 demonstrating significant stenosis.

allows Fourier analysis of pulsatile wave forms, color-coded spectral display of flow velocity and direction, and estimation of sample volume. Our recent experience using this method in over 60 patients with various cerebrovascular disorders is the subject of this report.

Methods

All examinations were made with a transcan sys-

From the Department of Neurosurgery* and Neurology,† University Medical Center, Jackson.

tem (EME, West Germany). The system incorporated a 2 MHz pulsed TCD as well as 4 and 8 MHz extracranial Dopplers that utilized continuous and pulsed wave. A color printer displayed data that was collected and stored following post-processing. Sixty-six patients had ultrasonic evaluation of the intracranial vessels and in 51 patients conventional angiography was carried out either before or following the ultrasonic arteriogram. The MCA was depicted in 62 cases, the anterior cerebral (ACA) in 44 cases, and the posterior cerebral artery (PCA) in 32 cases. The ophthalmic collaterals were evaluated in 17 patients.

Results

Fourteen patients were evaluated for arteriovenous malformations (AVMs). Of these, the ultrasonic arteriogram was diagnostic in 10 patients. Three patients were evaluated after resection and a remaining nidus was identified in two of these and, in the third, a complete resection was found. This was confirmed with conventional angiography. In one patient, small deep-seated AVMs in the posterior temporal lobe were not diagnosed by ultrasonic arteriography. On conventional angiograms, the malformation was supplied by what appeared to be a slightly dilated left PCA via the choroidal branch. The most convincing evidence of an AVM

on ultrasonic arteriograms is a large collection of vessels representing the nidus, with flow usually directed away from the probe when the probe is placed over the affected hemisphere. In most cases, the AVM could be insonated directly and the diagnosis made from the characteristic gruff sound. Feeder vessels into AVMs were found to have flow velocities well above the range expected from normal arteries. The ultrasonic examination was accurate in identifying feeder vessels (see Figures 1A and 1B). It was less effective in identifying outflow veins. The low resistance through an AVM is demonstrated by the wave form pulsatility. The pulsatility index (systolic velocity minus diastolic velocity divided by the mean velocity) is low in vessels feeding AVMs in comparison to the contralateral vessels or to normal pulsatility values.⁴

The ultrasonic arteriogram was not useful in predicting intracranial aneurysms. Of 21 patients studied, only 2 showed diagnostic findings. In one of these, an area adjacent to the internal carotid artery showed both to-and-fro flow and was accompanied by a musical murmur. In another, a large area of

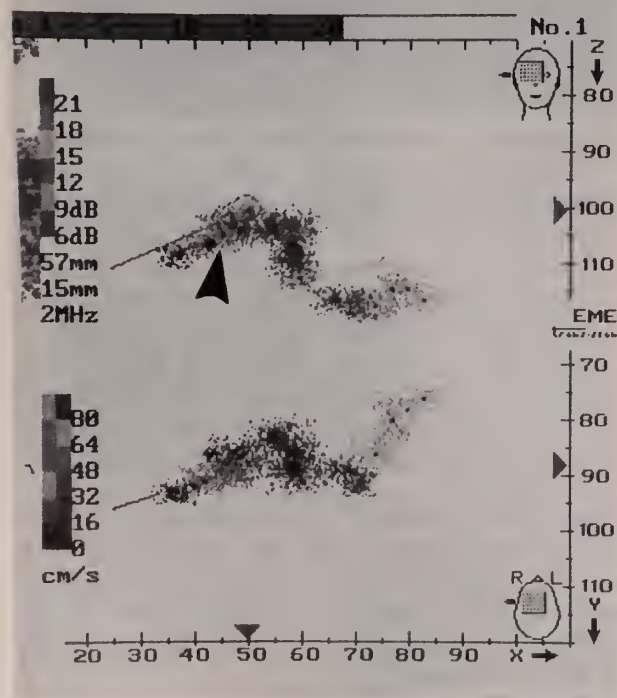


Figure 1A. Conventional angiography demonstrates the MCA which feeds an AVM (arrow).

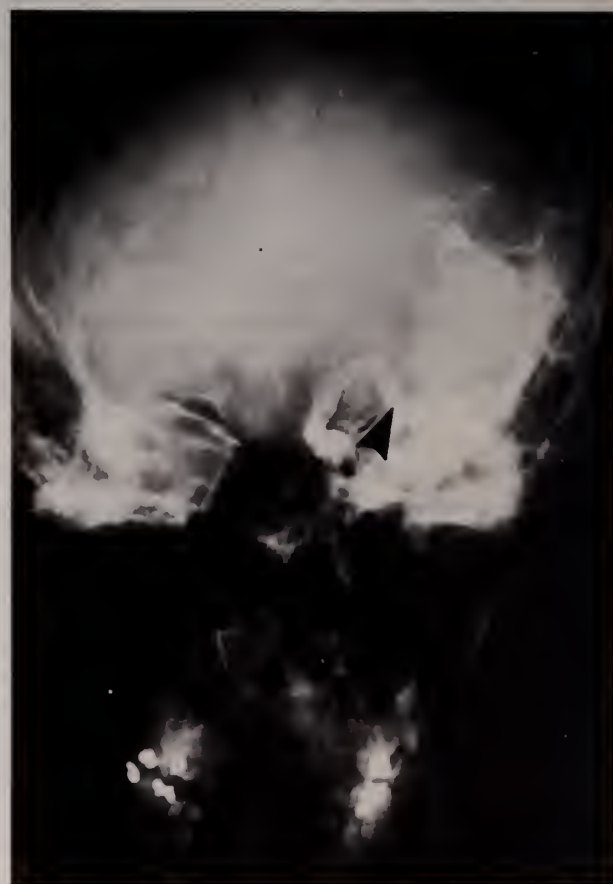


Figure 1B. The ultrasonic arteriogram demonstrates the AVM filling from the terminal MCA (arrow).

turbulent flow was identified at the terminal branches of the M-1 and corresponded to a giant aneurysm visualized on the conventional angiogram. The ultrasonic arteriogram was useful in evaluating for vasospasm and, early in the course of the disease, seemed to correlate well with angiography although flow velocities in spastic arteries remained elevated, however, for much longer periods of time than indicated on the angiographic pattern. The reasons for this were not clear. In some cases, there was probably persistent hyperemia due to distal infarction. In other cases, the circulation time or autoregulation may have been impaired (see Figure 2). The ultrasonic arteriogram was also useful in evaluating clip placement. When the patient with aneurysms of the internal carotid artery was treated with carotid artery occlusion or clamping, the ultrasonic examination yielded daily or even hourly evaluation of the intracranial dynamics. Within one turn of complete closure of a Crutchfield clamp, flow velocity diminished and reversed in the ACA and a to-and-fro movement of blood was seen in this vessel. As complete closure was made, there was reversal of flow in the anterior cerebral artery, while middle cerebral flow normalized and equilibrated with its counterpart in the opposite hemisphere, thus assuring adequate perfusion and allowing removal of clamp handle at that time.

In ischemic cerebrovascular disease, ultrasonic arteriography was useful in 21 patients. The most common findings in patients with arterial occlusion were reversed ophthalmic artery flow, reversed ACA flow, and altered MCA flow velocities, either increased or decreased depending on whether infarction had taken place and the age of the lesion. Reversed MCA flow and elevated ACA flow was seen in one case of MCA embolization in which there was retrograde flow in the MCA through collaterals derived from the ipsilateral ACA. Proximal carotid artery lesions reduced MCA flow velocity and dampened pulsatility.

Discussion

Although ultrasonic images created by third generation computerized stereotaxic mapping devices are useful to the physician in several settings, they are not considered to be replacements for cerebral arteriograms. Rather, they provide adjunctive information, are useful for screening, and can be repeated as often as necessary to evaluate both the anatomical and dynamic aspects of the cerebral circulation. The technique is inexpensive, noninvasive, well-tolerated by the patient, and provides a pictorial and physiological chart that may be used

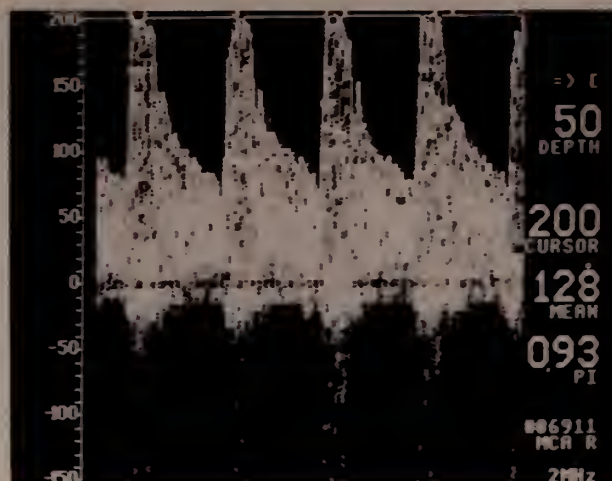


Figure 2. Hyperemia resulting in increased MCA velocity 24 hours following carotid endarterectomy.

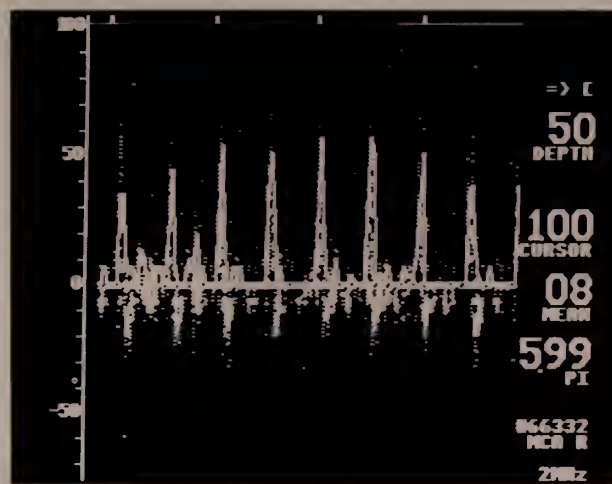


Figure 3. To-and-fro oscillations are indicative of brain death. No diastolic flow is detected.

for later reference and for patient explanation. The advantages of the three dimensional stereotaxic device over the second generation hand-held transcranial instrument are numerous. The capability of moving 2 mm along the course of a vessel, charting the pathway and velocity, minimizes the chance that the sample volume will be inadvertently moved from one intracranial vessel to another. The stereotaxic features allow precise and continuous comparison of velocities, directions, and pulsatility while simultaneously viewing the arteriogram on the screen. The three-dimensional image allows the surgeon to establish both an anatomical and physiological relationship to the lesion seen in the vascular tree. The nidus of an arteriovenous malformation can be placed anatomically in relation to the middle cere-

bral, anterior cerebral, and posterior cerebral branches. The feeding vessels can also be accurately identified. In one of our cases, a brain tumor was suspected on the basis of medial and upward displacement of the MCA in relation to the contralateral vessel.

As a predictor of intracranial aneurysm, ultrasonic arteriography lacks sensitivity. However, in the evaluation of the patient with cerebral vasospasm, the sensitivity of the ultrasonic arteriography exceeds conventional radiographic imaging. It is our feeling that velocity alterations may not necessarily coincide with vasoconstriction but may be indicative of hyperemia due to a number of other causes including infarction and loss of autoregulation. However, the ultrasonic studies more closely parallel the clinical course; when the improvement in velocities is noted, clinical improvement occurs shortly thereafter.⁵

In the evaluation of intracranial arterial stenosis and occlusion, the indirect features often yield the diagnosis. Reversal of flow in the ACA and/or the MCA, accompanied by high velocity flow in collateral arteries, points to major stenosis or occlusion.⁶ Periorbital collateral examination is useful in identifying proximal carotid artery lesions if a reversal of flow is detected to indicate external carotid collateralization. Because of the angle of insonation, ultrasonic examination through the temporal windows will probably not be useful for lesions in the distal branches of the MCA or anterior cerebral arteries. Lesions of the carotid at the base of the skull, where the angle of insonation approaches 90 degrees will be overlooked due to the Doppler shift. With age, intracranial vessels become tortuous and the angle of insonation may change. At 60 degrees, only half of the real velocity is observed. Therefore, when low velocity alone is obtained, especially in distal branches, interpretation must be made with caution. Due to the uneven thickness of the temporal bone, the inability to insonate a vessel does not necessarily mean that it is absent or occluded.

In addition to its usefulness in the assessment of intracranial hemodynamics in carotid artery stenosis or occlusion, the TCD may be used to evaluate acute ischemic cerebral vascular disease. It was reported recently that blood velocity in the MCA in patients suffering complete hemiplegia of less than twelve hour duration may be of prognostic significance.⁷ In this study of seven patients in whom blood velocity was greater than 30 cm/sec, five made complete or partial useful recovery of the involved hand and arm. Among eight patients in whom blood velocity was less than 30 cm/sec, one recovered com-

pletely, while the other seven retained permanent total paralysis of the hand and arm.

Ultrasonic arteriography may find its greatest use in the evaluation of the outpatient. Those patients recovering from arterial surgery, suffering from headaches or transient deficits, and hearing noises in the ear or head are especially suited for this examination. With modification, the vertebral and basilar arteries may also be mapped. Using the continuous wave features, flow direction in the vertebral arteries may be evaluated and subclavian steal may be corroborated using a blood pressure cuff. The hyperemia that follows release of the cuff may produce easily detectable changes. In the evaluation of patients who present with seizure disorders, ultrasonic arteriography should allow accurate prediction of those with arteriovenous malformations. Even conventional angiography may fail to disclose the small thrombosed or cryptic AVM and only with magnetic resonance imaging can these lesions be defined. However, ultrasonic arteriography correlates well with conventional angiography in the detection of AVMs.

More recently, some investigators have suggested that TCD may be useful in further understanding the basic pathophysiology of migraine. Some migraines seem to have relatively increased vascular reactivity (more dramatic velocity changes) during hyperventilation when compared to controls.

In the in-hospital setting, TCD can be used to evaluate brain death. The diagnostic feature of brain death observed when using TCD is a to-and-fro movement or "sloshing" seen in the MCA when no diastolic flow is present (Figure 3). This results from the same column of blood moving forward and backward with no progression of the blood column through the vessel.⁸ In our cases TCD correctly indicated brain death in 6 cases.

It has been our experience that the TCD is more sensitive than the technetium flow scan. When compared to the EEG, flow in the MCA usually ceases before the termination of all electrical activity. Therefore, TCD is less sensitive than EEG in recognizing living tissue. Finally, TCD is helpful in differentiating those patients in a deep barbiturate coma where arterial flow is preserved but cerebral function is not.

The method is useful in the evaluation of patients with acute infarction since angiography may not be safely performed. This patient may then be monitored to collect information concerning progressive cerebral hemodynamic changes. Finally, TCD is also useful in the patient who for religious or immunologic reasons declines routine angiography.

The patient with an infarct, may be followed serially and information gathered on a day-by-day basis concerning cerebral hemodynamics. ★★★

Dr. Smith: 2500 North State Street (35216)

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Coexistent Discoid Lupus Erythematosus and Psoriasis: A Therapeutic Dilemma

GARY G. BOLTON, M.D.

Clinton, Mississippi

THIS 53-year-old white man had a 25-year history of psoriasis limited to his elbows and knees. In January 1988, he was referred to our dermatology clinic for evaluation of an erythematous, scaling skin eruption that had been present for about one year. The lesions had started on his arms and then gradually spread to his trunk, face, neck, and legs. The rash was mildly pruritic and worsened with sunlight. Physical examination revealed typical psoriatic plaques on the elbows and shins along with erythematous, scaling plaques on the face, neck, trunk, and extremities. The lesions in sun-exposed areas appeared worse. His fingernails showed pitting and onycholysis. Biopsy of a forearm lesion revealed follicular keratotic plugs along with mild perivascular and pilosebaceous lymphocytic infiltrates, consistent with discoid lupus erythematosus (LE). ANA was 1:160 in a homogeneous pattern and antibodies to SS-A and SS-B were negative. A CBC was normal.

Treatment initially consisted of topical steroids and sunscreens. The lesions of discoid LE continued to worsen and systemic corticosteroid therapy with prednisone (60 mg/day) was begun. This resulted in improvement in the lesions of discoid LE. The prednisone was gradually reduced to 20 mg every other day. At that point, he developed a widespread flare of psoriasis necessitating an increase in his steroid dosage. At the time of this writing, his psoriatic lesions have stabilized and the prednisone is again being cautiously tapered.

Discussion

Psoriasis is a common condition affecting 1-3%

The author notes that psoriasis is a common condition and primary care physicians should be aware of drugs that can worsen this disease. He describes the case of a patient with coexistent discoid lupus erythematosus (LE) and psoriasis. He discusses therapeutic problems encountered in this case and reviews drugs reported to exacerbate psoriasis.

of the general population.¹ Patients with psoriasis may also have non-dermatologic conditions such as hypertension or ischemic heart disease. It is important for primary care physicians to know what medications can result in flares of psoriasis. Antimalarials,² beta blockers,³ lithium,⁴ and non-steroidal anti-inflammatory drugs (NSAIDs)^{5,6} have been reported to worsen psoriasis and withdrawal of corticosteroids has been reported to cause pustular psoriasis.⁷

The coexistence of discoid LE and psoriasis is unusual¹ and presents therapeutic problems because therapy directed at one disease may result in worsening of the other. Sunlight can improve psoriasis but may worsen discoid LE. Hydroxychloroquine can be very effective for discoid LE,⁸ but has been reported to flare psoriasis.² Abel et al⁹ found a low incidence of this complication, and thought anti-malarial prophylaxis for travel to endemic areas of malaria was not contraindicated in psoriasis patients. They did advise caution in the use of anti-malarials in patients with coexistent LE and psoriasis.

Beta blockers are widely used in the treatment of

From the Department of Medicine, University Medical Center, Jackson, MS.

angina, arrhythmia, and hypertension. Initiation and exacerbation of psoriasis have been associated with the cardioselective and non-selective beta blockers. Gold et al,³ in a recent retrospective study, reported exacerbation of psoriasis in 72.4% of patients treated with beta blockers. Alterations in cyclic AMP levels resulting in stimulation of epidermal cell growth is a proposed mechanism for this effect. Some controversy still exists concerning psoriasis and beta blocker usage.⁹

NSAIDs are commonly used by primary care physicians in the treatment of musculoskeletal conditions. Exacerbation of psoriasis has been reported with phenylbutazone⁵ and indomethacin.⁶ Meclofenamate has been reported both to improve psoriasis and to worsen the disease. In 1986, Ellis et al¹⁰ reported a double-blind study of 103 patients to determine the effect of meclofenamate in psoriasis. They found no improvement of psoriasis in those given meclofenamate in a double-blind fashion. Also, less than 5% of their patients had worsening of psoriasis with meclofenamate. A postulated mechanism of NSAID exacerbation of this disease is inhibition of cyclooxygenase leading to increased leukotriene production.⁹ Leukotrienes are hypothesized to play a role in the pathogenesis of psoriasis,¹¹ but the exact role of the arachidonic acid cascade in this disease is unsettled.⁹

Withdrawal of corticosteroids has been reported to exacerbate psoriasis and lead to generalized pustular psoriasis.⁷ Generalized pustular psoriasis is a serious systemic illness characterized by fever followed by waves of sterile pustules. These patients are acutely ill and usually require in-hospital care. Therefore, systemic steroids should be carefully tapered in patients with psoriasis.

Lithium carbonate is used in the treatment of manic disorders and depression. Its use has been reported to induce psoriasis¹² and to exacerbate preexisting psoriasis.⁴ Proposed mechanisms for exacerbation of psoriasis by lithium involve cyclic AMP and neutrophils.^{9, 12} Despite potential adverse effects, lithium therapy is not contraindicated in psoriasis patients⁹ but the physician should be aware of this association.

Coexistent discoid LE and psoriasis is unusual and can be difficult to treat. This case illustrates how drug therapy can potentially exacerbate psoriasis. It is important for primary care physicians to know what drugs can adversely affect this disease. This knowledge can influence therapeutic decisions and lead to timely dermatologic referral when treatment with an implicated drug is necessary.

Summary

Patients with psoriasis are commonly seen by primary care physicians for non-dermatologic conditions. Physicians should be aware of drugs that can worsen psoriasis which include antimalarials, NSAIDs, lithium, and beta blockers. Withdrawal of corticosteroids can cause pustular psoriasis.

★★★

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THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

Our Image: Self-Service or Self-Sacrifice

WHAT DO YOU, as Mississippi physicians, visualize as your most outstanding problem professionally?

As you are well aware, a survey was conducted of Mississippi physicians as a part of the strategic planning process this past year. Surveys were mailed to all active MSMA members, and 1481 of you responded to that questionnaire. It is important to note that one of the top three issues that you considered most important was the public image of the medical profession. Of potential services that the Mississippi State Medical Association might be able to provide, strongest support existed for promoting an improved physician image, the survey revealed.

I want to quote for you a paragraph from the recently published book, *Medical Education In Mississippi*: "The first meeting of the Mississippi State Medical Society, which had about 50 participants enrolled, was held at Mississippi College in Clinton in January of 1846. Members chose officers and discussed several matters, the most important of which was the need to improve the image and standards of the medical profession."

It is astounding to see how far we have come as a medical profession in the last 143 years. It is even more amazing to see how little we have changed as far as our perception of the way the public views us. All this probably means is that our public image is not really very different than it was 140-plus years ago. The image of the personal physician remains very high in the eyes of our patients, but some believe that over the past 25 years the image of this profession has slowly declined. Many factors have probably contributed to this change in our image. In my opinion, however, the most significant are: the negative image we may project by opposing change; the image we often project in today's environment of being more concerned with our own economic welfare than with the health care of our patients; and the significant lack of visibility in the community.

Your medical society can do a great deal as far as providing a resource for you and in providing organizational guidelines, information and even patient services. However, your medical society cannot become individually proactive for each one of you. Your medical society cannot put your patients ahead of all else. Your medical society cannot become more involved in your communities,

(Continued on page 186)

Legislative Elections And Tort Reform

The January 18 "We Care Day," while very successful in one sense, was a little disappointing in the meager awards in tort reform.

Our coverage in the *Journal* was splendid, but the publicity we received from the media left much to be desired. I can't help believing that we could have done better if we had pushed more for it.

In the final analysis it becomes increasingly evident that we are going to have to defeat the lawyers at the polls. More PAC money should be devoted to exposing the situation to the public when they come up for reelection, and to try to locate and promote more business men and women to these positions.

W. MONCURE DABNEY, M.D.
Editor Emeritus

The Wednesdays Have It

Have you ever noticed how the people from the northern part of our state periodically complain about most of our medical meetings being held on the coast? Who knows, maybe we should alternate Corinth or Tupelo with the coast. This reminds me that the other day I was looking at my calendar and noticed a strange thing . . . every month the medical meetings were scheduled on Wednesdays. Now how or why this happens I don't really know, but what I do know is that my day off is Thursday. It has been for thirty-plus years, and I do hope that it will continue to be my day off for the next twenty-seven years. Anything that interferes with my day off has to be something really dreadful!

Now you have seen Thursday people like me and I have seen other-day people. For example, my wife is a Tuesday person; ie, the sprayman comes on Tuesdays; the house cleaners come on Tuesdays; and most important, the beauty shop appointment is on Tuesdays.

The ones that bother me are the Wednesday people. They are the ones who spend their time off on Wednesdays going to medical meetings instead of being on the golf course or doing what off-day people are supposed to be doing. I wonder if all organizations meet on Wednesdays like the preponderance of medical groups do.

True, I should be proud that all medical meetings are on Wednesdays — then I wouldn't have to worry about going to them or missing them, as the case may be. The fact is that I feel a little guilty when I miss them because I sure do like to put my "two-bits" in on medical things, whether it's asked for or not. That may be part of the reason they put those meetings on Wednesdays. Of course it may be that Wednesday people are better able to make decisions than us Thursday people.

I have considered changing my day off from Thursdays to Wednesdays but (1) people probably wouldn't show up at my office for me to treat on Thursdays, (2) my son would complain about not being off on Wednesdays, and (3) it really takes a different personality-person to be off on Wednesdays and I just don't think that I could handle it.

If it is okay, would some of you nice Wednesday people please pray for us Thursday people. I can tell that we really do need all the help we can get.

Thank God I'm a physician in this strange world of week-day-people.

JOE JOHNSTON, M.D.
Associate Editor

Medico-Legal Brief

Pediatrician Liable for Failure to Diagnose Infant's Hip Problem

A pediatrician could not escape liability for his negligence merely by showing that a subsequent treating physician was also negligent, the highest court of New York ruled.

A malpractice action was brought against the pediatrician, based on his failure to diagnose an infant's hip problem. The question of whether he had actually performed a procedure to ascertain whether the child had a congenital hip dislocation was hotly contested. It was undisputed that failure to perform the maneuver would be malpractice. The pediatrician referred the child to an orthopedist, who treated her for several months but did not diagnose a hip problem. The diagnosis was not made until the child was over three years of age.

The jury decided for the child, and an appellate court affirmed. On review, the highest state court said that mere referral of a patient to a second physician did not make the referring physician vicariously liable for negligence by the second physician. However, in the present case, there was evidence from which the jury could have found that the pediatrician had been independently negligent in diagnosing the child's condition and that the misdiagnosis was a proximate cause of the child's injuries. Therefore, the pediatrician, as the initial wrongdoer, could not escape liability merely by showing that the orthopedist to whom the child was referred was also negligent. The court affirmed the lower court's judgment. — *Datiz v. Shoob*, 522 N.E.2d 1047, 527 N.Y.S.2d 749 (N.Y.Ct. of App., March 29, 1988)

Editor's Note: A previous decision was reported in *The Citation*, Vol. 55, No. 3, p. 33.

PRESIDENT'S PAGE

(Continued from page 184)

in your schools, in your churches, or even your local governments. These are things that you, as individual physicians, must do or our image collectively (or your image individually) will not improve.

I do not believe that we have lost the trust of the public. I certainly believe that we command still

the highest respect of any profession that has existed. However, it is absolutely essential and of urgency that each physician individually accept his or her responsibility for guaranteeing continuation of the public's trust and for demonstrating to the public that we have a commitment to service as opposed to self-interest.

As many of you are well aware, my primary concern over the last several years has been in the field of comprehensive school health education. It is my strong conviction that almost all the social ills that lead to poor health could be addressed in a significant way if we were able to reach the point of good comprehensive health education in our state. For instance, the problems of teenage pregnancy, the problems of perpetuating the poverty cycle, the problems of drug use and abuse and the problems of mental health issues, can all be impacted by comprehensive health education and by helping young people develop healthy self-images. If we, as a medical association, became evangelists for comprehensive health education, I believe that our image as individuals and a profession would be enhanced beyond any measurement.

With that in mind, your MSMA Auxiliary and I have already begun plans for a multi-year project involving first, the education of the public — particularly the educators and physicians of the state, concerning the question, "What is school health education?" We then plan to conduct state-wide health education fairs for school-age children. We hope to finance, staff, and equip a mobile health education teaching facility that will be at the disposal of every county auxiliary and county medical society, and even individual physicians throughout the state, for use in health education. I envision this as a life-long project of this medical society and I will encourage you individually and collectively to get involved. I hope that this year many of you will become medical directors for your school district. I hope that we will be able to adequately indoctrinate and educate physicians as to their role as a medical director for school health education. It is my feeling that through this grass-roots effort involving physicians of a local level, we can have a great impact on legislation and legislative issues. Involvement in this issue can have, for our state, immeasurable and lasting results.

I want to encourage and challenge each of you to become involved in public service of some kind at the local level.

I want to thank you for your confidence, and I pledge to you my continued effort in trying to enhance our image and improve our profession.

MEDICAL ORGANIZATION

Dr. Hill and Jean Hill Become Medical "First Family"

Dr. J. Edward Hill will be installed as 1989-90 president of the MSMA during closing ceremonies of the 121st Annual Session, now underway in Biloxi. Dr. Hill, who succeeds Dr. David Steckler, will be in Chicago later this month for the inauguration of his wife, Jean, as AMA Auxiliary president.

In his first president's message (page 184 of this issue), Dr. Hill announces the focus of his year as MSMA president — an emphasis on health education and improving the image of the profession. As AMA Auxiliary president, Jean Hill will promote unity.

AMA Official Visits CMS



Dr. James Todd, senior deputy executive vice president of the AMA, was guest speaker at Central Medical Society's April meeting. Dr. Todd, right, is pictured with CMS members Dr. John Paul Lee and Dr. Fred McMillan, MSMA board members from district 4.

MSMA Recognized by AMA for Membership Achievement



Dr. David Steckler, 1988-89 president of the Mississippi State Medical Association, accepts a membership award from Dr. John Ring, chairman of the AMA Board of Trustees. It is the third consecutive year that MSMA has been recognized by the AMA for achievements in membership recruitment.



Dr. David R. Steckler, center, president of the MSMA, received an award from Homochitto Valley Medical Society in recognition of his service to organized medicine in Mississippi. On hand for the presentation were Dr. Swink Hicks, left, and Dr. Sidney Graves, right, both past presidents of the MSMA and members of HVMS.

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Frank Cochran

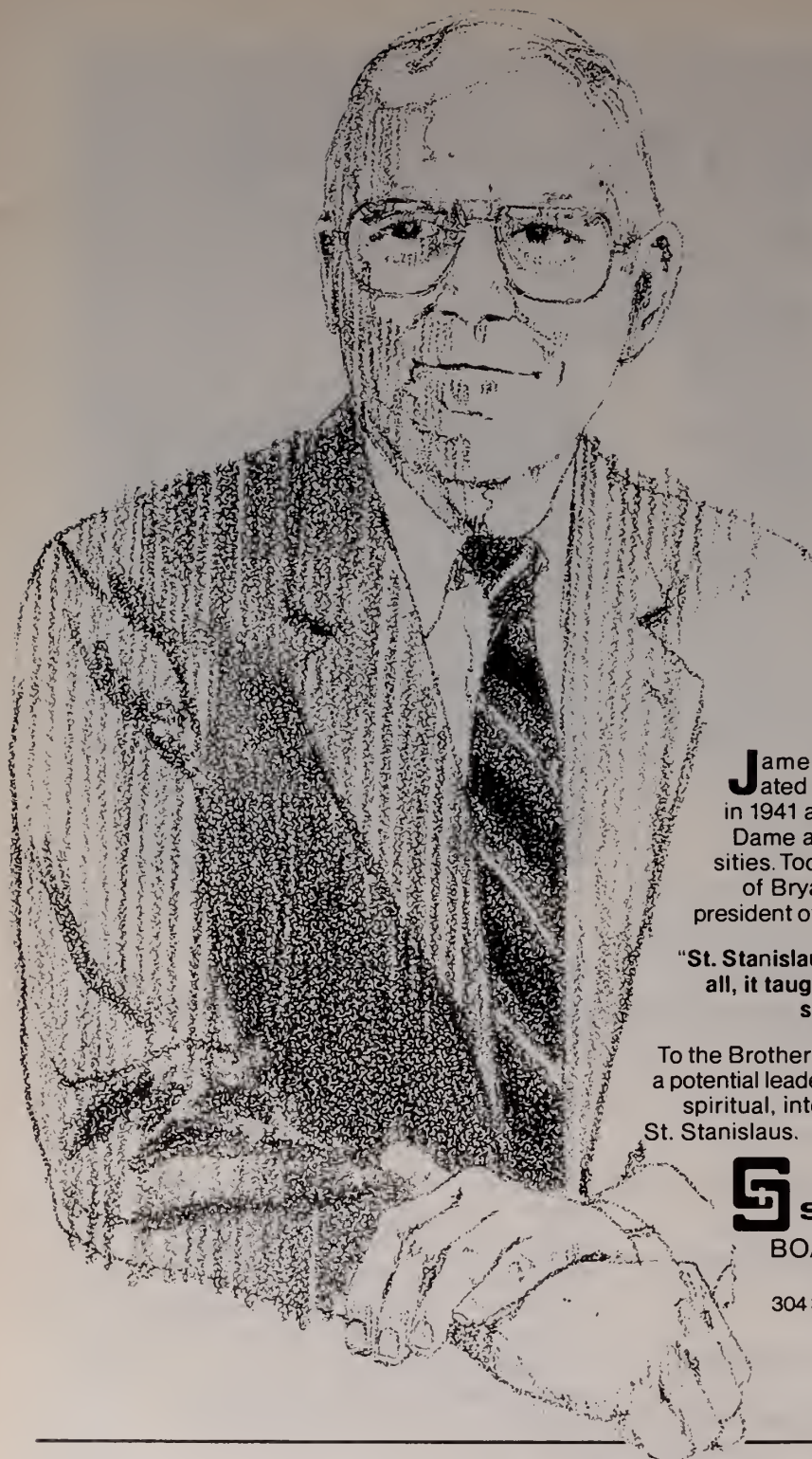
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PERSONALS

GEORGE E. ABRAHAM, II of Vicksburg presented a program, "Cholesterol Update," at the Utica Public Library.

OSSAMA AL-MEFTY of UMC made presentations at the Southern Neurosurgical Society meeting in Alabama and the American Association of Neurological Surgeons meeting in Washington, DC.

BRUCE ATKINSON has associated with The Cardiology Group of Mississippi for the practice of cardiology at 1151 North State Street, Suite 608.

CHRISTOPHER BALL of Jackson has been elected president of the Jackson Gynescic Society.

JACK BLACKBURN of Picayune presented a public education lecture on "Pap Smears and Cervical Cancer" in Picayune in April.

MIKE BOLAND of Tupelo spoke on preventing heart disease at Verona Junior High School.

SCOTT BOSWELL has associated with the Pennington Clinic in Ackerman for the practice of family medicine.

RONALD BULLOCK of Hattiesburg has completed requirements to retain active membership in the American Academy of Family Physicians.

GEORGE R. BUSH of Laurel has been recertified as a fellow of the American Academy of Family Physicians.

FRANK L. BUTLER of McComb announces his retirement from the practice of gynecology.

BRYAN COWAN of UMC was a faculty member at the South Central Ob-Gyn Annual Meeting in Honolulu.

JAMES M. CUMMINGS of Corinth has been named a diplomate of the American Board of Urology.

OWEN EVANS of UMC was guest speaker during a meeting of pediatricians in Hattiesburg.

ALAN FREELAND attended a taping session of the Video Journal of Orthopaedic Surgery meeting in Dallas.

GLEN GRAVES of UMC recently presented a seminar in Clarksdale.

BEN T. GREGORY announces the opening of his office for the practice of plastic and reconstructive surgery at 502 Eason, Suite B, in Tupelo.

HARPER HELLEMS of UMC was installed as governor of the American College of Physicians during the 70th annual session in San Francisco. He also made a site visit to the New Jersey College of Medicine in Newark.

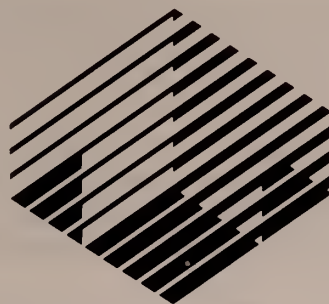
GARY HOLDINESS of Kosciusko spoke on cholesterol at a meeting of the Country Extension Homemakers Club.

HAROLD HUDSON of Tupelo recently received the Julius G. Berry Outstanding Volunteer Award presented by the United Way of Greater Lee County.

JAMES HUGHES of UMC was guest speaker during an orthopedic conference at Bowman Gray School of Medicine in Charleston, South Carolina.

MICHAEL JABALEY of Jackson, who recently completed a year as president of the American Foundation for Surgery of the Hand, has been named the first national chairman of the foundation's fundraising campaign. In addition, he was elected to serve a term as governor for the American Society for Surgery of the Hand.

DAVID B. KEDDY of Greenville has announced the closing of his medical office effective April 21.



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PERSONALS/Continued

HERBERT LANGFORD of UMC spoke at a symposium in New Orleans, was guest lecturer at Shreveport/Bossier Academy of Medicine and LSU Medical Center, spoke at Tampa (Florida) General Hospital, and was guest lecturer at Our Lady of the Lake Hospital in Baton Rouge.

LEWIS D. LIPSCOMB of Jackson has announced his retirement from the practice of obstetrics and gynecology effective May 1.

JAMES MARTIN of UMC lectured during Grand Rounds at Keesler Medical Center.

JAMES S. MCILWAIN, JR. has been appointed medical director of Hinds General Hospital.

G. RODNEY MEEKS of UMC was speaker at the meeting in San Francisco of the Society of Behavioral Medicine.

JOHN P. MLADINEO of Jackson announces the relocation of his office for the practice of gynecologic surgery and gynecologic oncology to 1151 North State Street, Suite 409.

JAMES D. MOORE announces the opening of his office for the practice of orthopedic surgery at 202-A Drinkwater Boulevard in Bay St. Louis.

WILLIAM C. NICHOLAS of UMC recently spoke to Mississippi Pharmacy Association meetings in Hattiesburg and Oxford, at Lion's Club district meetings in Vicksburg and Columbus, and at Central Lion's Club in Jackson.

RAYMOND OVERSTREET of Jackson was speaker at a seminar on teen suicide sponsored by the Columbus Municipal School District.

SESHADRI RAJU of UMC was faculty member at the Third International Workshop in Vascular Surgery in Larnaca, Cyprus.

ROGER REED of Gulfport has been recertified as a fellow of the American Academy of Family Physicians.

E. LINWOOD SHANNON of Hattiesburg recently completed a laser course at Southern Baptist Hospital in New Orleans and participated in a laser preceptorship program at the Houston Laser Institute.

EDWIN P. SUDDUTH of Jackson announces his retirement from the practice of Internal Medicine.

ED THOMPSON of Jackson spoke before the Subcommittee on Health and the Environment of the House Committee on Energy and Commerce during recent Congressional hearings. He represented the American Public Health Association and the Council of State and Territorial Epidemiologists, and delivered testimony in four areas: tuberculosis control, immunization, STD control, and epidemiology and general disease.

GUY T. VISE, JR. of Jackson recently was honored with the Vernon Nickel-Rancho Los Amigos Alumni Association's Alumnus of the Year Award presented at the annual meeting of the American Academy of Orthopaedic Surgeons in Las Vegas.

W. LAMAR WEEMS of UMC served on the regional advisory council of the Southeastern/Atlantic Regional Medical Library Services meeting in Baltimore.

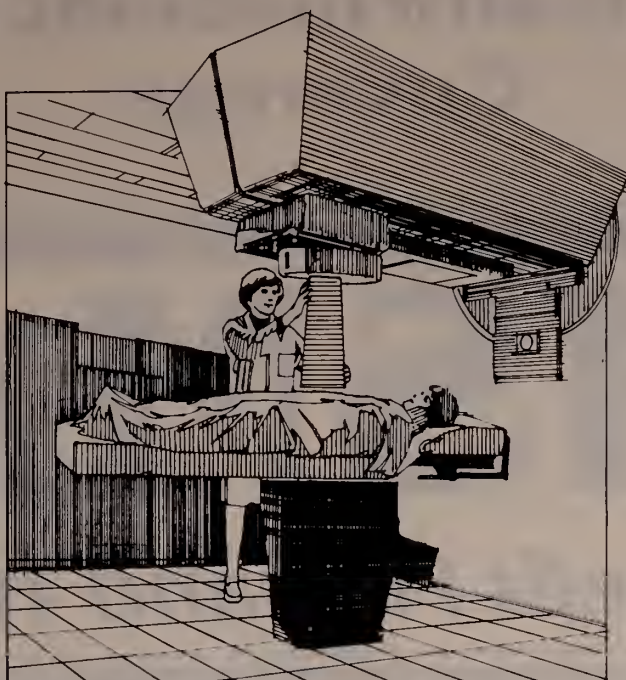
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NEW MEMBERS

BIGELOW, CAROLYN L., Jackson. Born Ann Arbor, MI, July 7, 1952; M.D., University of Mississippi School of Medicine, Jackson, 1979; interned and medicine residency, University Medical Center, Jackson, 1979-82; hematology fellowship, University of Washington, Seattle, 1983-87; elected by Central Medical Society.

BLOOM, SHERMAN, Jackson. Born Brooklyn, NY, Jan. 26, 1934; M.D., New York University School of Medicine, New York, NY, 1960; interned one year, Kings County Hospital, Brooklyn, NY; pathology residency, New York University and Bellevue Hospital, New York, NY, 1961-66; elected by Central Medical Society.

CURRIER, MARY MARGARET, Jackson. Born Ann Arbor, MI, June 12, 1956; M.D., University of Mississippi School of Medicine, Jackson 1983; interned one year, same; MPH and preventive medicine residency, John's Hopkins School of Hygiene & Public Health, Baltimore, MD, 1986-88; elected by Central Medical Society.

DROGIN, MARK, Jackson. Born New York City, Sept. 22, 1953; M.D., Harvard Medical School, Boston, MA 1978; interned one year, Southside Hospital, Bay Shore, NY; family practice residency, University of Arkansas, Little Rock, 1979-81; psychiatry residency, same, 1982-86; elected by Central Medical Society.

GLOVER, JACK F., JR., Ocean springs. Born Venus, TX, Oct. 11, 1932; M.D., University of Texas, Southwestern Medical School, Dallas, 1957; interned Letterman Army Hospital, San Francisco, one year; internal medicine residency, Parkland Memorial Hospital, Dallas, 1963-65; fellowship in nephrology, University of Texas, Dallas 1961-63; elected by Singing River Medical Society.

GORDON, LLOYD JAMES, III, Brandon. Born Memphis, TN, Sept. 1, 1950; M.D., University of Tennessee Center for Health Sciences, Memphis, 1976; interned and medicine residency, University of Alabama, Birmingham 1977-80; elected by Central Medical Society.

GREGORY, BEN THOMAS, Tupelo. Born Okolona, MS, Sept. 18, 1923; M.D., University of Tennessee Center for Health Sciences, Memphis, 1954; interned one year, Methodist Hospital, Memphis; general surgery residency, Kennedy VA Hospital, Memphis 1956-57 and March-September 1959;

plastic surgery residency, St. Johns Hospital, Tulsa, OK, October 1959 to September 1960 and Henry Ford Hospital, Detroit, MI, 1960-62; elected by Northeast Medical Society.

KIRKLAND, CHARLES K., Starkville. Born Jackson, MS, May 22, 1954; M.D., West Virginia School of Osteopathic Medicine, Lewisburg 1984; interned one year, Cuyahoga Falls General Hospital, Cuyahoga Falls, OH; elected by Prairie Medical Society.

MADDOX, BILL FRANKLIN, JR., Greenville. Born Greenwood, MS, Oct. 1952; M.D., West Virginia School of Osteopathic Medicine, Lewisburg, 1987; interned one year, Logan General Hospital, Logan, WV; elected by Delta Medical Society.

MAUTERER, ARTHUR A., Kosciusko. Born New Orleans, LA, July 25, 1953; M.D., Louisiana State University School of Medicine, New Orleans, 1957; interned one year, Charity Hospital, New Orleans; general surgery residency, Touro Infirmary, New Orleans, 1959-62 and Georgia Baptist Hospital, Atlanta 1963-65; elected by North Central Medical Society.

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NEW MEMBERS/Continued

MILLETTE, TERRENCE J., Pascagoula. Born Pascagoula, MS, June 30, 1954; M.D., University of Mississippi School of Medicine, Jackson, 1981; interned and ophthalmology residency, University Medical Center, Jackson, 1981-86; neuro-ophthalmology residency, Massachusetts General Hospital, Boston 1984-86; elected by Singing River Medical Society.

MOONEY, JOSEPH SPENCER, Brookhaven. Born West Memphis, AR, April 14, 1958; M.D., University of Mississippi School of Medicine, Jackson 1983; interned and otolaryngology/head & neck surgery residency, Shands Hospital, Gainesville, FL 1983-88; elected by South Central Medical Society.

ODOM, MAX KENNON, Coffeeville. Born Los Angeles, Sept. 4, 1960; M.D., Louisiana State University Medical Center, Shreveport 1986; interned one year, Baptist Medical Center, Birmingham 1986-87; elected by North Mississippi Medical Society.

PANDE, PURUSHOTTAM, Gulfport. Born Latur, India, April 6, 1949; M.D., Gandhi Medical College of Medicine, India, 1975; interned one year, same; medical residency, Methodist Hospital, Brooklyn, NY, and hematology/oncology residency 1980-86; elected by Coast Counties Medical Society.

PETRO, JOHN V., Hattiesburg. Born Aug. 24, 1953; M.D., University of Mississippi School of Medicine, Jackson, 1980; interned and ophthalmology residency, same, 1980-86; elected by South Mississippi Medical Society.

ROMAINE, CHARLES BOYD, JR., Booneville. Born Franklin, TN, May 7, 1937; M.D., Emory University School of Medicine, Atlanta, 1963; interned and surgery residency Grady Memorial Hospital, Atlanta, 1963-65; elected by Northeast Mississippi Medical Society.

SALAZAR-TIER, MARYRUTH, Vancleave. Born Walsenburg, CO., Jan. 10, 1952; M.D., University of Colorado School of Medicine, Denver 1984; interned one year, St. Joseph Hospital, Denver, and family practice residency, 1984-87; elected by Singing River Medical Society.

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SIMPSON, HELEN ELENA, Canton. Born Lexington, KY, Aug. 4, 1958; M.D., Tulane University School of Medicine, New Orleans, 1984; interned and family practice residency, Baylor Family Practice program, Houston, TX, 1984-87; elected by Central Medical Society.

STRONG, THOMAS C., Greenville. Born Shreveport, LA, March 11, 1957; M.D., Louisiana State University School of Medicine, Shreveport, 1983; interned and general surgery residency, University of Oklahoma, Tulsa, OK 1983-88; fellowship, Texas Heart Institute July-December 1988; elected by Delta Medical Society.

WINTERS, CHARLES JOSEPH, Ocean Springs. Born New Orleans, May 22, 1957; M.D., Louisiana State University School of Medicine, New Orleans, 1983; interned one year, Charity Hospital, New Orleans; orthopaedic surgery residency, Louisiana State University, New Orleans, 1984-88; spine surgery fellowship, same, July-December 1988; elected by Singing River Medical Society.

WRIGHT, MAUDE ANDREWS, Jackson. Born Magnolia, MS, Oct. 18, 1953; M.D., Tufts University School of Medicine, Boston, MA, 1979; interned Boston University, 1979-1980; psychiatry residency, University of Southern California, 1980-82; child psychiatry fellowship, same, 1982-83; elected by Central Medical Society.

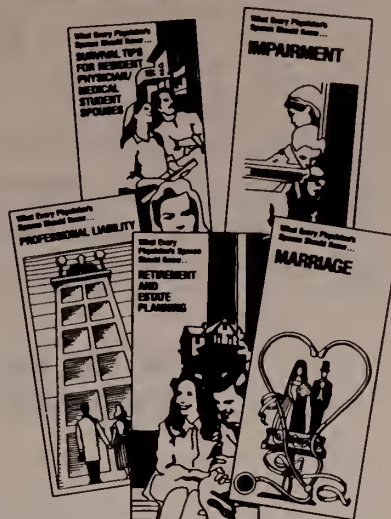
DEATHS

GREEN EARL W., Hattiesburg. Born McLain, MS, Jan. 1, 1908; M.D., Tulane University School of Medicine, New Orleans, 1932; graduate study, Hurst Eye, Ear, Nose & Throat Hospital, Longview, TX and New York Eye and Ear Hospital; died March 15, 1989, age 81.

ROBERTS, CURTIS D., Brandon. Born New Albany, MS, July 15, 1926; M.D., Northwestern University Medical School, Chicago, 1952; interned one year, Wesley Memorial Hospital, Chicago, 1952-53; pediatric residency, University Medical Center, Jackson, MS, 1965-67; died March 18, 1989, age 62.

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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 18-22, 1989, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 121st Annual Session, May 31-June 4, 1989, Biloxi. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, Aug. 2-6, 1989, Gulf Shores, AL. Mrs. Alyce Palmore, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. H. S. Barrett, Secy., P.O. Box 1810, Gulfport 39501. Counties: Hancock, Harrison, Stone.

Delta Medical Society, 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSoto County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Emrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Grenada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. David H. Irwin, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. D. Winn Walcott, Secy., 2173 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Jack Hollister, Secy., P.O. Box 9000, Columbus 39705. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. John J. McClosky, Secy., 3003 Short Cut Rd., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society, 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Wayne M. Pitre, Secy., 1202 Mission Park Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

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Mississippi Baptist Medical Center
1225 N. State Street
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4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Sergeant Prentiss Dr.
Natchez, MS 39120

King's Daughter Hospital
Highway 51 N.
Brookhaven, MS 39601

Charter Hospital of Jackson
Lakeland Drive
Jackson, MS 39208

Biloxi Regional Medical Center
150 Reynoir St.
Biloxi, MS 39533

Jeff Anderson Regional Medical Center
2124 14th St.
Meridian, MS 39301

Mercy Regional Medical Center
100 McAuley Dr.
Vicksburg, MS 39180

Golden Triangle Regional Medical Center
2520 Fifth St., North
Columbus, MS 39701

Northwest Mississippi Regional Medical Center
Hospital Dr.
Clarksdale, MS 38614

North Panola County Hospital
I-55 at Highway 315
Sardis, MS 38666

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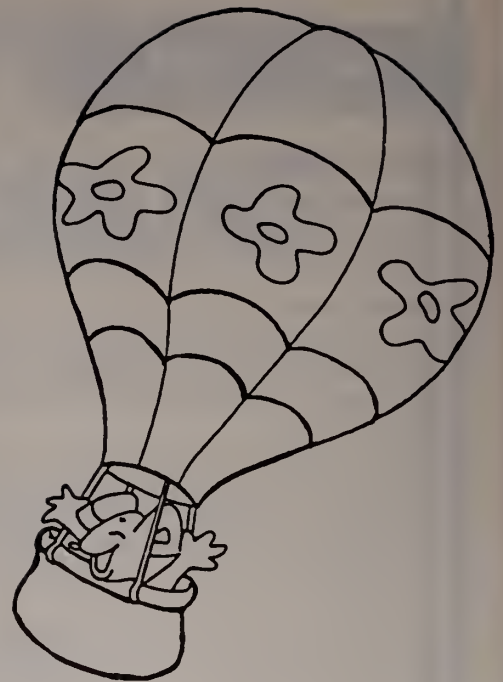
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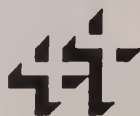
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The author is responsible for all statements made in his work, including changes made by the manuscript editor. Manuscripts are received with the understanding that they are not under simultaneous consideration by any other publication and have not been previously published. All manuscripts will be acknowledged, and while those rejected are generally returned to the author, the JOURNAL is not responsible in event of loss. Manuscripts accepted for publication become the property of the JOURNAL and are copyrighted by the association when published. They may not be published elsewhere without written release and permission from both the JOURNAL and the author.

All copy must be double spaced, including legends, footnotes, and references. Generous margins at the top, bottom, and on both sides of the page should be allowed. Each page after the title page should be consecutively numbered and carry a running head identifying the paper and author.

Titles should be short, specific, and clear. Ordinarily, a title should not exceed 80 characters, including punctuation.

References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list. Textbooks, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the *Index Medicus*, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

Manuscripts accepted for publication are subject to copy editing. Authors will receive galley proof prior to publication. Galley proof is only for correction of errors, and text changes

may not be made. The galley proof should be returned by the author within 48 hours from receipt, and no further changes may be made.

Illustrations consist of all material which cannot be set into type such as photographs, line drawings, graphs, charts, and tracings. Illustrations should be submitted separately from text copy. Figures and drawings should be professionally prepared with black ink on white paper. Photographs should be of high resolution, unmounted, untrimmed, glossy prints. Each must be clearly identified. No charges are made to authors for up to four illustration engravings. More are not permitted unless voted on by two editors and extra costs must be absorbed by the author.

Illustrations must be numbered and cited in the text. Legends, not exceeding 40 words and preferably shorter, must accompany each illustration, typed double spaced on separate sheets. The following information should appear on a gummed label affixed to the back of each illustration: Figure number, manuscript title, author's name, and arrow indicating top of the illustration.

In photographs in which there is any possibility of personal identification, an acceptable legal release must accompany the material.

A thesis summary of 75 to 100 words must accompany each manuscript.

Reprints may be obtained at cost plus shipping charges from the association and **should be ordered prior to publication.** The JOURNAL reserves the right to decline any manuscript. Authors should avoid placing subheads in the text, and the Editors reserve the prerogative of writing and inserting subheads according to JOURNAL style. — *The Editors.*

In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Mississippi State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript. — *The Editors.*

RECOLLECTIONS

"Wanted: Physicians who offer suggestions, raise questions, debate issues, and make good decisions. Minimum requirements for job are membership in medical association and concern over the future of American medicine. All qualified applicants assured of work." Those were the words of Dr. James L. Royals, in his first article as 1969-70 president of the MSMA, which appeared twenty years ago in the *Journal*.

Dr. Royals commented on the fact that great changes were taking place in the delivery of medical care, and concluded, "we must be active participants in our association, deeply involved in the team effort. The day has passed when any among us can successfully go it alone. Indeed, the association can't make the grade with a few taking on the tasks of many."

That issue of the *Journal* included a complete report of the 101st Annual Session, which had been conducted at the Buena Vista Hotel in Biloxi. Among the items of business considered by the House of Delegates were: the medical association's positions on Blue Shield, comprehensive health planning,

nurse education and licensure, insurance disclosure to hospitals, laboratory advertising, and charges by hospitals for medical services. The House also approved an addition to the headquarters building.

Scientific articles in the June 1969 issue concluded: "UMC Stroke Unit: Review of the First 100 Cases," by Drs. A. F. Haerer, R. R. Smith, and R. D. Currier; "Intestinal Amebiasis," by Dr. Nancy R. Burrow; and "Blood Assurance Plans: An Answer to Blood Shortages," by Dr. James B. Hartney of Chicago.

Ten years later, in the June 1979 issue, Dr. Gerald Gable wrote his first president's message for the *Journal* as 1979-80 MSMA president. He commended physicians across the state who were actively participating in the association and joining in the collective effort to face the problems ahead and continue to render the finest medical care to patients.

That issue of the *Journal* included the report of the 111th Annual Session, during which Dr. Robert S. Caldwell of Tupelo was named president-elect and Drs. James Rayner of Oxford, Barry Holdcomb of Vicksburg and Louie Wilkins of Brookhaven were elected as vice presidents, Dr. Elmer Nix was re-elected secretary-treasurer and Dr. Myron Lockey was elected to another term as associate editor. Elected to the Board of Trustees were Dr. Whitman B. Johnson of Clarksdale, Dr. W. Joseph Burnett of Oxford, and Dr. William C. Gates of Columbus.

The House of Delegates had considered a busy agenda at the 111th Annual Session, and major actions included: adopting an official position paper on health needs in the state; adopting 16 recommendations for controlling health care costs; endorsing new mechanisms to strengthen relationships with medical students and housestaff; establishing a specific committee to monitor and report on federal/state health programs; endorsing the AMA's model bill providing for determination of death; amending the MSMA Bylaws to permit membership for Doctors of Osteopathy; establishing the MSMA Disabled Physicians' Program; and restating concern over inequities in Medicare fees.

Winning the MSMA scientific exhibit competition during the 111th Annual Session was "Treatment of Selected Fractures with the Wagner Apparatus," by Drs. James J. Hughes, Heinz Wagner, Frazier Ward, and Charles S. Rhea.

Scientific articles in the June 1979 issue were: "Analgesic Nephropathy," by Drs. Jairo Barona-Q., and John Bower; and "Clinical Osmometry in Patients Having an Impaired Sensorium or in Coma," by Dr. Leo J. Scanlon.

Review A Book

The following books have been received by the JOURNAL MSMA. Members of MSMA interested in reviewing one of these volumes should address requests to the Editor. After submitting a review for publication, you may keep the book for your personal library.

Disease and Distinctiveness in the American South. Todd L. Savitt and James Harvey Young. University of Tennessee Press, 1988.

Health Risks and the Press: Perspectives on Media Coverage of Risk Assessment and Health. Mike Moore, Editor. The Media Institute, Washington, DC and The American Medical Association, Chicago, IL. \$12.95. 1989.



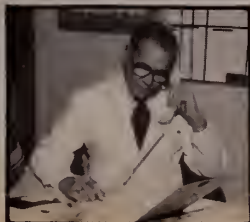
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POSTGRADUATE CALENDAR

July

ANNUAL SUMMER OPHTHALMOLOGY MEETING
July 29
Ramada Renaissance Hotel, Jackson

August

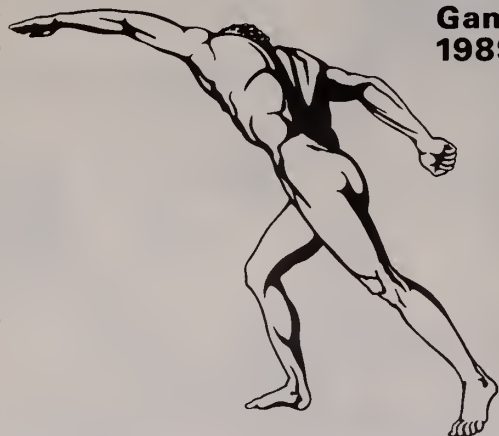
ATLS PROVIDER COURSE
Aug. 17-18
University Medical Center

PALS PROVIDER COURSE
Aug. 30, 31 and Sept. 1
University Medical Center

SPORTS MEDICINE
Aug. 12
Holiday Inn Medical Center, Jackson

For more information or a program brochure, contact the University of Mississippi Medical Center Division of Continuing Health Professional Education, 2500 North State Street, Jackson, Mississippi 39216-4505; or call (601) 984-1300.

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Ville de Montréal



Dr. Holwick outside of hospital where she practices as a civilian traumatologist.



Dr. Holwick in operating room at Letterman Army Medical Center.

JANN L. HOLWICK, M.D.

General and Trauma Surgeon.
Captain, U.S. Army Reserve.

EDUCATION University of Southern California, B.S.;
University of California School of Medicine.

RESIDENCY Harbor General Hospital—UCLA
Medical Center.

HOSPITAL AFFILIATIONS St. Luke Hospital;
Huntington Memorial Hospital, Pasadena, California;
Traumatologist, Arcadia Methodist Hospital, Arcadia,
California.

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VASOTEC

(ENALAPRIL MALEATE) (MSD)

Contraindications: VASOTEC® (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: *Angioedema.* Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, Drug Interactions and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General:* **Impaired Renal Function:** As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dose reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See Drug Interactions.)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methylglucoside, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C. There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies in pregnant women. VASOTEC® (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of 14 C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

Hypertension: The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

Heart Failure: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, Hypotension); cardiac arrest; pulmonary embolism and infarction, rhythm disturbances; atrial fibrillation; palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION), prostatic hypertrophy.

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Other: Muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include leg myalgia and arthralgia, an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure (See WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: **Hypertension:** In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, Pharmacodynamics and Clinical Effects.) Dosage may be adjusted depending upon clinical or pharmacodynamic response. (See WARNINGS.)

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VOLUME XXX

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NEWSLETTER

July 1989

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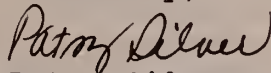
The Health Care Financing Administration (HCFA) is extending indefinitely the grace period for complying with ICD-9-CM coding requirements on all Medicare Part B claims, in order to assure a continued "smooth implementation." HCFA says the transition to ICD-9-CM coding is progressing very satisfactorily. Carriers reported that more than 90% of physician claims contained diagnosis codes in April, which was the original date for implementation.

Although most physicians are now submitting the ICD-9-CM diagnosis codes, many are failing to link the codes to the services rendered. The AMA has prepared a booklet advising physicians of what they need to know about the new requirements.

Dr. Robert McAfee, member of the AMA Board of Trustees who spoke at MSMA's 121st Annual Session last month, recently had the opportunity to answer charges made by Rep. Pete Stark during hearings concerning research on patient outcomes. In a meeting of the Subcommittee on Health of the House Ways and Means Committee, Congressman Stark declared that physicians never concern themselves with public health, only with private gain. Dr. McAfee responded by calling attention to physicians' and the AMA's significant efforts in the public interest. He specifically mentioned campaigns to curb tobacco use, to battle AIDS, to champion legislation safeguarding the rights of AIDS patients, and other concerns.

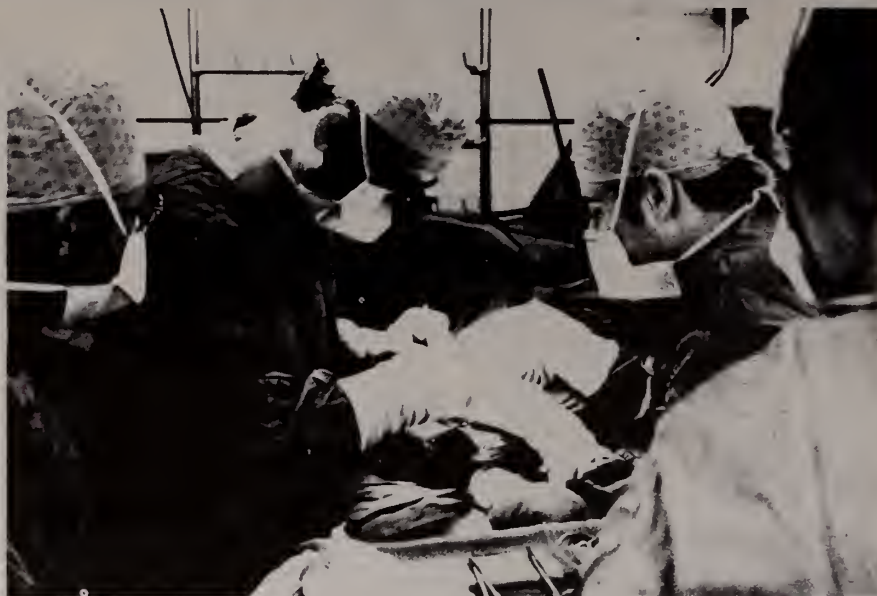
It is now policy that Medicare carriers must invite medical society comment when any proposed change in local medical policy is contemplated. The new procedure implements another step in the seven-point agreement HCFA entered into with the AMA last January to obviate a threatened lawsuit by the AMA.

Sincerely,



Patsy Silver
Managing Editor

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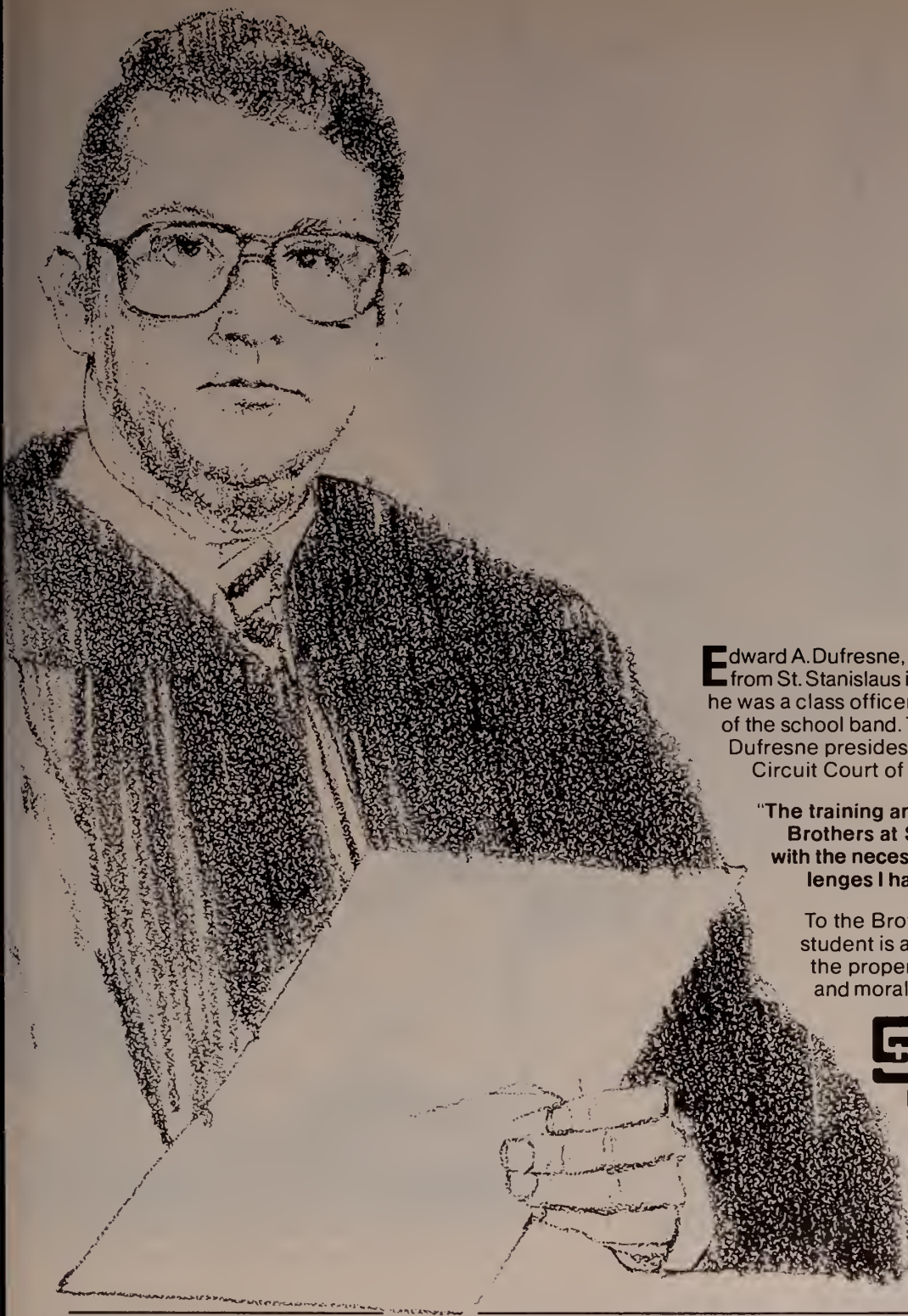
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DATELINE

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Jackson, MS - Proceeds from the sale of note cards by MSMA Auxiliary will go to AMA-ERF. The cards feature a reproduction of a Jackie Meena painting, "Belle of the South," commissioned by the MSMAA in honor of Mrs. Ed (Jean) Hill, AMA Auxiliary president. To ask about the tax deductible purchase (\$10 per packet) contact Karen Stephens, 1105 Oakleigh, Hattiesburg, MS 39402; (601) 264-0154

ACP Advocates Focus On Adolescent Health

Philadelphia, PA - An updated approach to adolescent health is needed, according to a statement by the American College of Physicians published in the June Annals of Internal Medicine. It calls for physicians to be more alert to prevention of adolescent health problems, and for adolescent medicine to be a greater component of medical school education, residency training, and continuing education.

Employee Health Bill Introduced

Washington, DC - Sen. Lloyd Bentsen of Texas introduced a bill that would substitute for Section 89, which requires businesses to show their health plans don't discriminate against lower-paid employees. Since Section 89 was complicated and expensive, the Treasury Department delayed enforcement of the rules until Oct. 1. Bentsen's alternative bill was signed by 32 other senators.

AMA Sets Conference On Family Violence

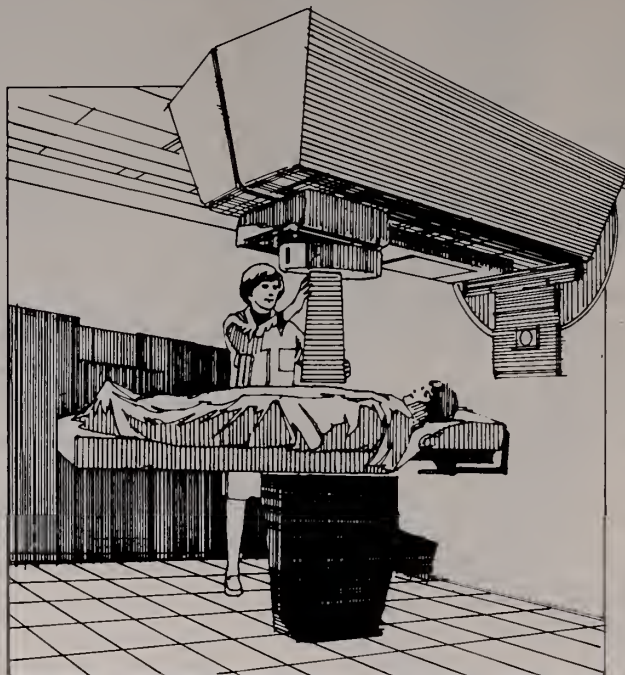
Chicago, IL - AMA will sponsor a conference on Prevention of Family Violence and Victimization Oct. 5-7 in Chicago. The multi-disciplinary conference, emphasizing current research, policies and practices involving diagnosis and treatment of family violence, includes workshops on: cycles of abuse; spouse/elder/child abuse; drugs and alcohol in family violence; and legal issues.

AMA Expands Physician Services

Chicago, IL - Medicine's changing demographics has brought about the creation of a new department, the Office of Special Groups, which will represent four groups that strongly influence health policies -- women physicians, foreign medical graduates, large medical group clinics and employed physicians, and business and labor organizations. Others, such as armed forces physicians, may be added.

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ORIGINAL PAPERS

Macular Degeneration: The Major Cause of Severe Vision Loss In Persons Fifty-Five Years or Older

GEORGE M. HAIK, JR., M.D.

W. LEE TERRELL III, M.D.

GEORGE M. HAIK, SR., M.D.

New Orleans, Louisiana

MACULAR DEGENERATION is the major cause of severe vision loss in the United States in persons 55 years or older. It is estimated to affect approximately 10 percent of people who are more than 65 years old.¹ The term "age-related" macular degeneration has been generally substituted for "senile" in the disorder commonly known as senile macular degeneration because of the disparaging connotation of the word "senile."² Macular degeneration alone does not cause total blindness since peripheral vision is usually unaffected. The cause of the major forms of macular degeneration is unknown.

Forms of the Disease

Involucional macular degeneration is the most common form of the disorder. It accounts for 70 to 90 percent of the cases of macular degeneration. It is referred to as the "dry" or nonexudative form. This type of macular degeneration is characterized by small yellow-white lesions, known as "drusen," beneath the retinal pigment epithelium and also by hyperpigmentation and atrophy of the pigment epithelium. Drusen appear to be an important asso-

ciated and predisposing feature of age-related macular degeneration. There is a breakdown or thinning of the tissues of the macula. Deterioration of central vision occurs slowly. These patients generally retain fairly good peripheral vision (see Figure 1).

Exudative macular degeneration accounts for only 10 percent of the cases of macular degeneration. If subretinal neovascularization occurs, the disease enters this exudative or "wet" stage. Normally, the macula is protected by a thin tissue, retinal pigment epithelium, which separates it from the fine chorioidal blood vessels which provide nourishment to the back of the eye. Sometimes anomalous new blood vessels break or leak and cause scar tissue to form. Often this leads to the growth of new and fragile abnormal blood vessels, which rupture easily and may leak blood and fluid destroying the macula and causing further scarring. A central, fibrous disciform scar of the macula is the final stage of exudative macular degeneration. The vision becomes blurred and distorted and the scar tissue blocks out central vision severely. Patients may become legally blind, but they retain peripheral vision and can usually walk about unaided. Spontaneous improvement is unusual. Patients with end-stage exudative macular degeneration in one eye tend to develop similar

From The George M. Haik Eye Clinic and The Eye Foundation of America, New Orleans, Louisiana

changes in the other eye at the rate of about 10 percent per year³ (see Figures 2, 3, 4).

Other types of macular degeneration are inherited, may occur in juveniles, and are not associated with the aging process. Injury, infection, or inflammation occasionally may also damage the macula.

Epidemiology

Neovascular/exudative retinopathy occurs in only a small percentage of persons with age-related macular degeneration. However, data from the Framingham Eye Study and from a large case-control study,⁴ have shown that the vast majority (79 and 90 percent, respectively) of patients with legal blindness due to age-related macular degeneration had the neovascular/exudative form of the disease.²

There is a rapid increase in the prevalence of age-related macular degeneration after the fifth decade of life. Increasing age has the strongest association with the disease of any of the risk factors thus far considered.⁵ The case control study results⁴ suggest that the development of macular degeneration is mainly influenced by familial, genetic, and personal characteristics, rather than by the few environmental factors that were studied.

Apparently increased ocular pigmentation tends to decrease the risk of developing age-related macular degeneration. Age-related macular degeneration is rarely observed in nonwhite individuals. A factor which may increase the risk of this disorder is blue eye color.⁶

Disagnosis

Some of the manifestations of age-related macular degeneration include the presence of drusen, atrophy of the retinal pigment epithelium, subretinal neovascularization, and disciform scars. Blurred vision and distortion, most often with near vision, are the most frequent early symptoms reported by patients with macular degeneration. Patients seldom reported noticing any Amsler grid abnormality from home use of this test. However, most patients showed Amsler grid abnormality during office examination. Noncompliance may explain this discrepancy.⁷

Patients at risk for neovascular maculopathy should be urged to use a variety of means to assess visual function in order to help them detect the earliest symptoms of submacular fluid. These should include reading vision, color saturation, and image clarity — and observing the Amsler grid.⁷

Visual loss occurs to a lesser degree in the non-exudative macular degeneration than in the exudative type of the disease. However, the progression

of the visual loss is slower and the course of the disorder is more benign.⁸

Laser Treatment

Laser photocoagulation is not curative, but appears to help some patients with exudative macular degeneration retain useful central vision. In a large, multicenter clinical trial, argon laser photocoagulation was demonstrated to reduce the risk of severe visual loss in patients with age-related macular degeneration with a well-defined neovascular membrane 200 μ m or greater from foveal center. However, the treatment was effective in only about 60 percent of patients who met the study criteria. Macular degeneration tends to be progressive. Two-year post-treatment occurrence rates of 50 to 60 percent have been reported in patients with age-related macular degeneration. The limited use of marginal effects of laser treatment for age-related macular degeneration and the need for further controlled trials of this therapeutic approach are inferred by several groups studying this subject.^{9, 10, 11} A more optimistic view of the possible benefit from laser treatment is held by others.¹²

A randomized clinical trial supported by the National Eye Institute is in progress to evaluate krypton laser photocoagulation for eyes with macular degeneration and neovascular membranes which extend into the avascular zone. A recent report indicated that more patients need to be studied to arrive at a definite conclusion.¹³

Potential Therapeutic Value of Zinc

Zinc plays a role in the metabolic function of several important enzymes in the chorioretinal complex. Therefore, a prospective, randomized, double-masked, placebo-controlled study of the effect of oral administration of zinc has been carried out. Although some eyes in the zinc-treated group lost some vision, this group had significantly less visual loss than the placebo group. This was a first controlled study of this nature to show a positive, if limited, treatment effect on macular degeneration. In view of the pilot nature of the study and the possible toxic effects of oral zinc administration, the widespread use of oral administration of zinc for macular degeneration is not warranted at present.^{14, 15}

Special Visual Aids

For patients who have lost central vision from macular degeneration there are aids such as special glasses, large-print books, hand-held magnifiers, large-print letters and numbers on playing cards,

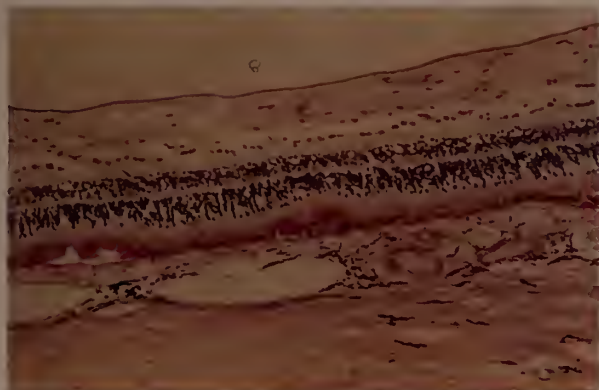


Figure 1. Involutional macular degeneration. PAS — positive drusen located between the attenuated retinal pigment epithelium and Bruch's membrane. (All photos courtesy of Daniel M. Albert, M.D., Massachusetts Eye and Ear Infirmary.)



Figure 2. Exudative macular degeneration. Low power view of a disciform macular scar. A thick, fibrous scar composed of dense connective tissue is seen between the choroid and the outer retinal layers, which has replaced much of the choroidal layer and has caused degeneration of the receptor layer.

calculators, telephone dials and timepieces, and other devices and services which are often helpful.¹ More complex — and more expensive — aids include talking calculators, reading machines which synthesize voices, sophisticated magnifiers for reading and television, and devices which speed up and slow down playback of tapes.¹⁶

Discussion

There is disagreement as to the degree of involvement of the peripheral area of the retina in age-related macular degeneration. Some ophthalmologists have concluded that the results of their studies suggest that retinal function abnormalities are confined to the central retina and the small age-related

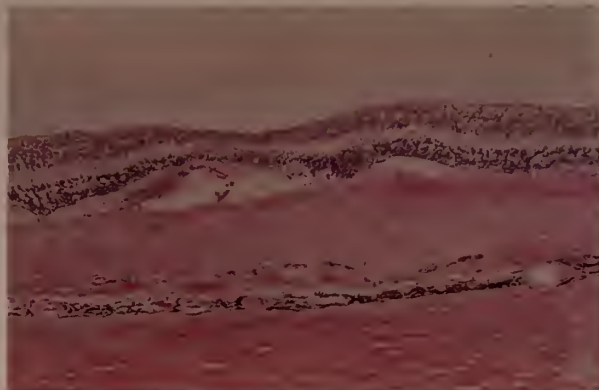


Figure 3. Exudative macular degeneration. A higher power view of a disciform scar with a fibrous plaque with pigment beneath the retina.

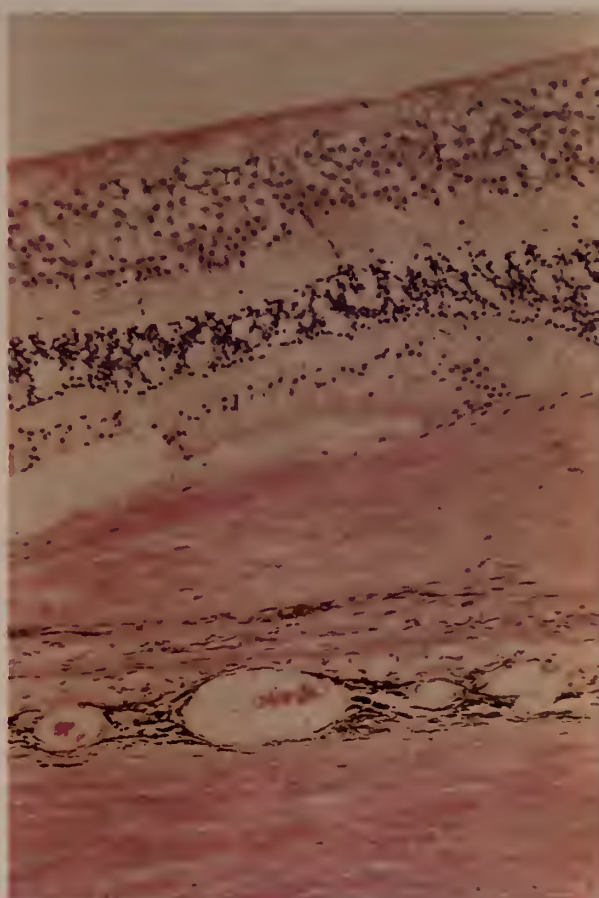


Figure 4. Exudative macular degeneration. High power view through a disciform macular scar, showing degeneration of the photoreceptor cells.

peripheral changes which they observed do not correlate with the degree of the macular degeneration.¹⁷ Conversely, others feel that they have shown that the aging process affects not only the macular region but the peripheral region as well.¹⁸ They concluded

that distinctions should be made among the various peripheral abnormalities in patients with this disease, since some of these abnormalities affect peripheral function as well as central retinal function. In their view,¹⁷ it is likely that peripheral retinal function is directly associated with the type and severity of peripheral retinal changes.

The limited value of photocoagulation in the spectrum of age-related macular degeneration is shown in many studies.^{9, 10} It is conjectured that prompt photocoagulation treatment, when indicated, may well result in a sharp reduction in the number of eyes made legally blind by the disease.² Still it is the impression of others that blue-green argon laser treatment can be applied to only a minor fraction of patients with this entity and the effect is minimal.⁹ The question has been posed — is photocoagulation a luxurious treatment reserved for a few patients? The response was that for the moment it is the only proven effective treatment ophthalmology can offer.¹⁰ ★★

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Acknowledgment

The assistance of Daniel M. Albert, M.D., David G. Cogan Professor of Ophthalmology, Harvard Medical School, and Eleanore Ebert, M.D., Massachusetts Eye and Ear Infirmary, who reviewed the

manuscript, is acknowledged. Kenneth G. Haik, M.D. and W. Lee Terrell, III, M.D. are the primary specialists in the use of laser treatment in our Clinic.

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Radiological Seminar CCXLXII: CT of Adrenal Gland Pheochromocytoma

JAMES U. MORANO, M.D.

PHILIP E. CRANSTON, M.D.

Jackson, Mississippi

COMPUTED TOMOGRAPHY (CT) is an accurate modality in the detection and localization of adrenal masses.¹⁻⁵ Pheochromocytomas are particularly well suited to evaluation with CT since the potential complications of more invasive tests such as angiography can be avoided. CT can detect tumors in both adrenal and extraadrenal locations. Pheochromocytomas which have recurred post-operatively and malignant pheochromocytomas which have associated metastatic disease can also be well evaluated with CT. Herein, we describe our experience with CT and pheochromocytomas arising from the adrenal gland over a recent six-year interval.

Materials and Methods

A retrospective review of 11 consecutive patients with pheochromocytoma arising from the adrenal gland was conducted. These patients were seen at our institution during the six-year period from 1980 through 1985. Patients with tumor arising from an extraadrenal location were excluded from our study. Eight of our patients had CT scans. All CT scans were performed on a GE 8800 total body scanner. Both oral and intravenous contrast material was given for all CT scans. No antiperistaltic agents were given.

Three patients with pheochromocytoma did not receive a CT scan. In one patient who died as a result of lung carcinoma, a pheochromocytoma was an incidental finding at autopsy. In another patient bilateral pheochromocytomas were an incidental finding during unrelated abdominal surgery. In a third patient with clinical and biochemical evidence of pheochromocytoma, the CT scan was pre-empted by an emergency cesarean section during which the tumor was located and removed.

Sponsored by the Mississippi Radiological Society. From the Department of Radiology, University Medical Center, Jackson, MS.

Computed tomography is a noninvasive and accurate means of evaluating the pheochromocytoma patient and providing localization of this tumor. Herein, we describe our experience with CT and pheochromocytomas arising from the adrenal gland over a recent six year interval.

Results

The CT scan detected the location and characteristics of the pheochromocytoma in all 8 of our patients who underwent evaluation with this modality. All of these tumors were round or oval in configuration and were soft tissue density. One tumor demonstrated cystic low density changes consistent with central necrosis (see Figure 1). Another tumor showed CT evidence of some calcification (see Figure 2). Tumor size ranged from 2.5-10 cm.

Taking all 11 of our pheochromocytoma patients into consideration, the ages of our patients ranged from 13-65 years. Nine patients were female, and two patients were male. Nine patients were black, and two patients were white. Two patients had bilateral pheochromocytomas (see Figure 2). Of the patients with unilateral tumors, seven arose on the left and two arose on the right. Two of the patients had malignant pheochromocytomas as evidenced by the appearance of metastatic disease (see Figures 3A and 3B).

It was interesting to note that over half of our patients had some other disease process or physical condition going on at the time of their pheochromocytoma diagnosis. In three of our patients the pheochromocytoma was diagnosed during pregnancy. Two patients had neurofibromatosis, one pa-

tient had bilateral renal cell carcinomas, one patient had esophageal carcinoma, and one patient had lung carcinoma at the time of pheochromocytoma diagnosis. Only one of the patients, whose tumor was discovered incidentally at autopsy for lung carcinoma, had no history of hypertension.

Discussion

Pheochromocytomas are catecholamine-secreting tumors that most often arise in the adrenal medulla. The patients frequently present for evaluation of sustained or intermittent hypertension. Sweating, palpitations, and headache are additional common complaints. In approximately 10% of patients, the pheochromocytoma arises from an extraadrenal site



Figure 1. Large pheochromocytoma arising from left adrenal gland. The tumor has an irregular soft tissue density wall. Large area of low density in center of tumor represents central necrosis.

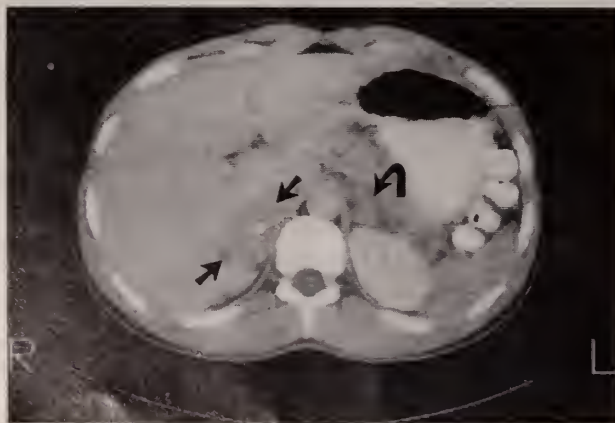


Figure 2. Bilateral pheochromocytomas. The larger tumor (straight arrows) arises from the right adrenal gland and demonstrates some high density areas of calcification. The smaller tumor (curved arrow) arises from the left adrenal gland.

which may be located anywhere from the neck to the pelvis.^{2,6} The most common extraadrenal location for a pheochromocytoma is in the organ of Zuckerkandl which is a sympathetic ganglionic plexus lying along the lower abdominal aorta.

With proper diagnosis and treatment the outcome for patients with benign pheochromocytoma is generally good. However, failure to properly detect and diagnose a pheochromocytoma is associated with high morbidity and mortality, regardless of whether it is benign or malignant.² Consequently, accurate detection of this condition is critical.

The diagnosis of pheochromocytoma is generally first suspected on the basis of clinical and biochemical findings. Computed tomography is then the initial imaging modality of choice in the localization of the pheochromocytoma, as well as any adrenal mass.^{1,3-5} The normal adrenal gland can be visualized on the vast majority of state-of-the-art CT scans, and the accuracy of CT scans in identifying adrenal masses of at least one centimeter in size is high.⁷ We perform our CT scans of the adrenal glands with both oral and intravenous contrast. We have not found the administration of antiperistaltic agents to be necessary. In fact, the administration of glucagon for this purpose should probably be avoided since glucagon has been used as a provocative test for pheochromocytomas and may precipitate a hypertensive crisis.^{8,9}

Computed tomography has several advantages over angiography, which was the previous imaging modality of choice in localizing pheochromocytomas. Although CT and angiography have a similarly high accuracy rate in the detection of pheochromocytomas, the CT scan is noninvasive and less likely to trigger a hypertensive crisis.⁷ Whereas angiography may have difficulty in detecting the occasional hypovascular or necrotic pheochromocytoma, CT accuracy will remain high in these cases.² Extraadrenal tumors are also well demonstrated on CT.^{2,9} Local invasion or frank metastatic disease from malignant pheochromocytomas is also better shown with CT.^{2,10} In addition, CT scans are well suited for evaluating the postoperative pheochromocytoma patient for recurrent disease.⁴

Angiography maintains a role in the evaluation of some pheochromocytoma patients. For instance, angiography is performed in those patients in whom the clinical suspicion for pheochromocytoma is high, but the CT scan has been unsuccessful in localizing the tumor.⁷ In addition, angiography may be helpful in evaluation of the renal arteries in some pheochromocytoma patients since there is an increased incidence of renal artery stenosis in these patients.⁷

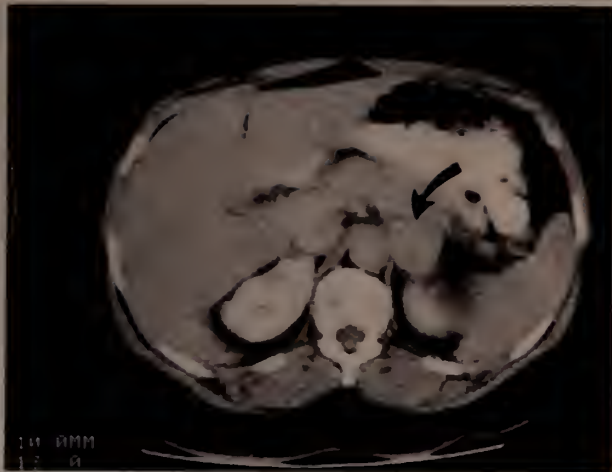


Figure 3A. Malignant pheochromocytoma (arrow) arising from left adrenal gland.

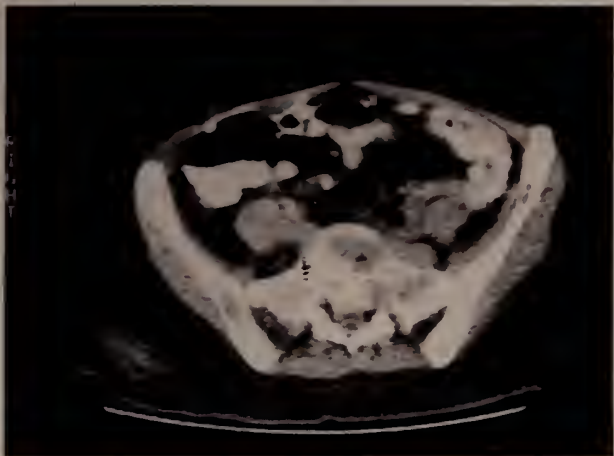


Figure 3B. Osteolytic lesions to sacrum and pelvis due to metastatic pheochromocytoma in same patient (biopsy confirmed).

Other newer radiographic imaging modalities will certainly have a competing or complimentary role with CT in the evaluation of pheochromocytoma patients. The use of I-131 MIBG scintigraphy shows promise in the detection of this tumor, especially

in individuals suspected of having recurrent or metastatic disease.¹¹ Magnetic resonance imaging (MRI) is also proving sensitive in the detection of adrenal masses.¹² However, CT remains a sensitive examination in the detection of these lesions, and it is currently more accessible to the general patient population than these newer modalities.

Summary

Herein, we have described our experience with CT and pheochromocytomas arising from the adrenal gland over a recent six year period. In all of our patients who underwent CT scanning, localization of the tumor was successful. CT remains an accurate means for localization of adrenal pheochromocytomas. ★★★

2500 North State Street (39216)

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THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

Take Action Now

ONCE AGAIN, medical care for the elderly is being attacked in order to reduce the federal deficit perpetuated by an unfettered bureaucracy. The architects of the policy that produced the deficit are a group of democratically elected politicians whose greatest talent is that of being relected by using various scapegoats to blame for grossly poor management policies.

Tied to a committee budget package that calls for about one billion dollars in physician spending curbs, and with Republican assistance, the Democratically led House Ways and Means health subcommittee had endorsed a controversial proposal to tie future Medicare fee updates for our professional services to government-set spending targets.

These expenditure targets (ET) are the most onerous aspect of a three-pronged physician payment reform plan that also calls for new Medicare fee schedule (RBRVS) and limits on balanced billing.

The Physician Payment Review Commission, which is responsible for making recommendations to Congress concerning physician reimbursement under Medicare, has endorsed the spending target concept.

Organized medicine, which has endorsed the Resource Based Relative Value Scale as the fairest and potentially most promising concept for physician fee payment schedule reform, considers the expenditure targets to be explicit rationing of care. As a natural consequence of rationing, medical care quality and access issues will come to the forefront and the deterioration of these two aspects of medical care will follow. When quality and access decline, it takes no superior intellect or unique imagination to realize who will be blamed.

A very prestigious panel that is independent and multidisciplinary was commissioned by the Harvard Community Health Plan to advise their half-million enrollees on future policies of the Plan. After three years of study, the panel recently stated that physicians should not be forced to bear the responsibility for rationing care to control costs.

If you, as Mississippi physicians, think that the concept of expenditure targets is correct in principle, and that they will be workable and fair in your practice, and that the government should establish these targets, then I suggest that you

(Continued on page 216)

EDITORIALS

JOURNAL OF THE
MISSISSIPPI STATE
MEDICAL ASSOCIATION

VOLUME XXX, NUMBER 7

JULY 1989

The Big Brown Bag

Prominently placed on the front page of our clinic's bimonthly newsletter is a note that says to the patient "Sack up *all* your medicine and bring it with you each time you come." Sure, we get a lot of brown paper bags. We also get a lot of plastic bags, empty CoolWhip containers, plastic freezer boxes, empty bread loaf bags, and every other kind of imaginable medicine container. (It reminds me of the collection of urine specimen containers I had before I built the new office . . . all the way from perfume bottles to empty whiskey jugs.)

Little by little after years of preaching, my patients are finally bringing their medicine in each time they come . . . well, most of them. I am still working on the hold-outs . . . I give them a real disappointed look when I ask them and find that they forgot to bring their medicine. Conversely, I brag on those who bring them and tell them how much it helps me with their care. I also explain that I am not absent-minded; it is simply that I like to know exactly what they are taking. Why? Because I have found, just as you have, that they are often not taking what we think they are taking and not what is written on their charts.

Oftentimes I find that my patient is: (1) taking last year's Digoxin with this year's prescription labeled Lanoxin; (2) still taking the emergency room physician's medication for an intercurrent illness along with mine long after the intercurrent illness is over; (3) doctor-shopping and therefore has several sedatives and analgesics from different doctors and different pharmacies; (4) not taking any of the very necessary medicine as evidenced by the bottle being still full; (5) taking a medication substituted by the pharmacist that is not even close to what I had prescribed; and (6) is taking a multitude of over-the-counter drugs that I was not aware of. One of the main reasons I do this is because it gives me a chance to write down each medicine on my chart;

evaluate the patient to see if he still needs the medicine; go over with him how to take it; and let him know whether to refill it or not.

The fastest growing segment of our population is the over-65 years of age group. This group has the highest potential for drug abuse through polypharmacy, as well as their being notorious for this non-compliance, hence the brown bag has helped me help my patient; has gotten him involved in his own health; and lets him know that I really do care about him and am interested in my medication doing the most it can to help him deal with his illness.

Thank God I am a physician in this strange world of Big Brown Bags.

JOE JOHNSTON, M.D.
Associate Editor

COMMENT

Was "Amalgamate" The Correct Word?

(Editor's Note: These were the remarks of Dr. Craig, presented as vice-speaker of the House of Delegates, at the concluding session, June 4, 1989.)

At our recent Annual Session objection was raised to the use of the word "almagamate" in the process of discussion of common interests and projects of the various organizations to which Mississippi physicians belong. The narrow definition of the word was taken to mean "merge" or "combine." It can also mean "unite" or "join together."

An amalgam is a combination of two or more elements that undergo a physical rather than a chemical change, so that the different elements that make up an amalgam can be separated into their parts without change. An amalgam is soft and brittle at first, but with time becomes strong and durable.

COMMENT/Continued

The process of amalgamation is used by the mining industry — things (gold, silver and other metals) that are precious and cannot be recovered any other way. No heat is created by the process of amalgamation and little, if any, is required to form an amalgam; certainly not as much as would be required to melt down and reform.

Only time, discussion, and the reestablishment of trust and relationships will prove the wisdom of the creation of a single body of these organizations; but I feel it is in the best interest of Mississippi physicians that we try.

Maybe we should have used “amalgamate” after all!

H. VANN CRAIG, M.D.
Natchez, MS

PRESIDENT'S PAGE

(Continued from page 214)

do nothing. However, if you do not endorse the idea of expenditure targets that will cap payments for physicians' services, then speak out now — not day after tomorrow, not next week, not next month, but right away. Sit down and write your congressman today or send a telephone message.

If you would like specific ammunition to convey organized medicine's viewpoint, then refer to your last several issues of “AM News” or contact your State Medical Association for information that you can utilize in contacting your congressional delegation.

On this page is a listing of your congressional delegation telephone numbers and official addresses.

Those who are truly interested in quality health care will act today.

MISSISSIPPI'S CONGRESSIONAL DELEGATION

Senate

Trent Lott	730 Hart Senate Office Bldg., Washington, DC 20510	(202)224-6253
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Thad Cochran	326 Russell Senate Office Bldg. Washington, DC 20510	(202)224-5054
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House of Representatives

Jamie L. Whitten	2314 Rayburn House Office Bldg. Washington, DC 20515	(202)225-4306
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Mike Espy	216 Cannon House Office Bldg. Washington, DC 20515	(202)225-5876
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G.V. (Sonny) Montgomery	2184 Rayburn House Office Bldg. Washington, DC 20515	(202)225-5031
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Mike Parker	1725 Longworth House Office Bldg. Washington, DC 20515	(202)225-5865
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Larkin Smith	516 Cannon House Office Bldg. Washington, DC 20515	(202)225-5772
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SPECIAL ARTICLE

Dr. Hill Installed as MSMA President; Dr. Nix Named President-Elect

Dr. J. Ed Hill of Hollandale was inaugurated 1989-90 president of the MSMA at the closing meeting of the 121st Annual Session held in Biloxi in June. He succeeds Dr. David R. Steckler of Natchez. Dr. J. Elmer Nix of Jackson was named president-elect.

The new MSMA president has served as president-elect and as chairman of the Board of Trustees. He currently serves as MSMA delegate to the American Medical Association, and is a Councilor for Southern Medical Association. He is a past president of the Mississippi Academy of Family Physicians and of the American Heart Association, Mississippi Affiliate. He recently served as chairman of Mississippi's Health Education Curriculum Development Committee. In 1987 he received the MSMA Community Service Award.

Dr. Nix, the new president-elect, has served as MSMA's secretary-treasurer. He currently is serving as an MSMA delegate to AMA, and is secretary

of the Board of Councilors for the American Academy of Orthopaedic Surgeons (AAOS). He is a member of Southern Orthopaedic Association, the Mid-America Orthopaedic Association and the Clinical Orthopaedic Society. He is past president of the North American Spine Society, the Mississippi Orthopaedic Society, and the Mississippi Arthritis Foundation.

Some 700 physicians, spouses and guests registered for the five-day session, which featured a full program of scientific, business and fellowship activities.

Among special guests was Dr. Robert McAfee, member of the AMA Board of Trustees, who addressed the House of Delegates and delivered the James Grant Thompson Memorial Lecture.

In addition to electing new officers, the House of Delegates took action on reports and resolutions concerning health care in Mississippi. A summary of House actions appears on page 225 of this issue.



Dr. Hill, left, repeats the oath of office as MSMA president. The oath was administered by Dr. David Owen, center, chairman of the Board of Trustees, and Charles Mathews, MSMA executive director.



Following his installation as 1989-90 president of the MSMA, Dr. Hill was pictured with president-elect Dr. Elmer Nix, center, and immediate past president Dr. David Steckler, right.



Dr. Richard Rushing, left, received the Robert S. Caldwell Memorial Award presented by Medical Assurance Company of Mississippi. Presenting the award was Dr. Lamar Weems, chairman of MACM's Caldwell Award Committee.



Dr. Steckler presented a check for \$29,157.70 in AMA-ERF contributions to Dr. Norman Nelson, dean of the University of Mississippi School of Medicine.



Dr. Thomas Gandy of Natchez, left, received the MSMA Community Service Award, presented by Dr. Steckler.



President Steckler addressed the House of Delegates at its Thursday morning session.



Dr. Hill, left, presented the James Grant Thompson Past President's Pin to Dr. Steckler.

Elections Highlight House of Delegates Sessions

Delegates to the 121st Annual Session named Dr. J. Elmer Nix of Jackson as MSMA's 1989-90 president-elect, and elected Dr. Eric E. Lindstrom of Laurel to fill one of three vice-presidential posts. Dr. Don Q. Mitchell of Jackson was elected to another term as secretary-treasurer.

Re-elected to posts on the Board of Trustees were: Drs. Stanley Hartness of Kosciusko, John Paul Lee of Forest, and Stanley A. Wade of Meridian. Drs. Myron Lockey of Jackson and Joe Johnston of Mt. Olive were re-elected as editor and associate editor, respectively, of *Journal MSMA*.

Several members of MSMA's delegation to the AMA were re-elected to serve new terms. Returning as delegates are: Drs. Carl Evers of Jackson, Ed Hill of Hollandale, and James C. Waites of Laurel. Returning as alternate delegates to the AMA are: Drs. Mal G. Morgan of Natchez and William C. Gates of Columbus. In addition, Dr. George E. McGee of Hattiesburg was named alternate delegate to AMA.

Elected to fill vacancies on Councils were: Drs. David Owen of Hattiesburg, Council on Budget and Finance, and Dr. Jack Evans of Laurel, Constitution and Bylaws. Named to the Judicial Council were: Drs. Edwin Egger of Greenville and Nell C. Moore of Tupelo. Elected to serve on the Council on Legislation were: Drs. Shelby Howell of Clarksdale, L. C. Henson of Kilmichael, and Steve Parvin of Starkville.

Drs. Eric McVey of Jackson and Stephen Tartt of Meridian were named to the Council on Medical Education, and Drs. Joel G. Payne of Jackson and T. Keith Everett of Meridian were elected to the Council on Medical Service. Drs. Stanley Hartness of Kosciusko and Dr. Kelley Segars of Iuka were named to the Council on Public Information.

Board of Trustees Elects New Officers

Dr. David M. Owen of Hattiesburg was elected to a second term as chairman of the MSMA Board of Trustees during the board's meeting June 4 in Biloxi. Dr. Lee Rogers of Tupelo was named vice-chairman and Dr. Fred McMillan of Jackson was elected secretary.

Other members of the board are: Drs. Mal Morgan of Natchez, Stanley Wade of Meridian, Stanley Hartness of Kosciusko, John Paul Lee of Forest, David Clippinger of Gulfport, and Walter Rose of



Dr. Robert McAfee, member of the AMA Board of Trustees, spoke to the House of Delegates.



Mrs. D.P. (Ruth) Smith, MSMA Auxiliary President, described auxiliary activities in her report to the House of Delegates.

Indianola. Also meeting with the board are: Drs. Ed Hill, president; Elmer Nix, president-elect; and David Steckler, immediate past president.



Pictured at a breakfast honoring MSMA Past Presidents are: seated, left to right, Dr. Rod Jenkins, Dr. David Steckler, and Dr. Sidney Graves. Standing, left to right, are: Dr. Carl Evers, Dr. Ralph Brock, Dr. Gerald Gable, Dr. Lamar Weems, Dr. Paul Moore, Dr. Joe Burnett, Dr. James Royals, Dr. Swink Hicks, Dr. J. T. Davis, and Dr. Joe Rogers.



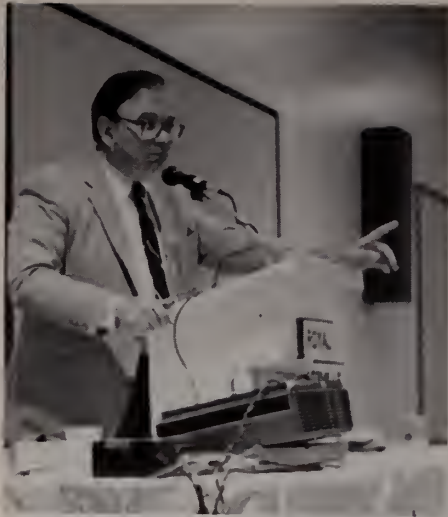
Members of the House of Delegates study resolutions presented for action.



Members of the Fifty Year Club attended a breakfast in their honor. Seated, from left, are: Dr. Alex Baines, Dr. Rod Jenkins, Dr. J. Gordon Dees, and Dr. J. T. Davis. Standing, from left, are: Dr. Moncure Dabney, Dr. O. P. Stone, Dr. James Fisackerly, Dr. Warren Jones, and Dr. Robert Blount.



Members of the House of Delegates at work.



Jackson attorney George Evans spoke to the Hospital Medical Staff Section. He described changes in hospital medical staff law.



Dr. Jimmy Waites, left, presided as speaker of the House of Delegates. He was assisted by Dr. Vann Craig, vice-speaker. At right are Dr. David Owen, chairman of the board, and Dr. Steckler, 1988-89 president.



Following his address to the Young Physicians Section, Rep. Ed Buelow, left, spoke with Dr. Eric Baumgartner.



Above, member of Reference Committee A study reports and resolutions before them. From left are Dr. John Bower, Dr. Bill Godfrey, and Dr. Joe Burnett. Pictured below are members of Reference Committee B. From left are Dr. Tim Alford, Dr. Elmo P. Gabbert, and Dr. Ray Lyle.



Dr. J. T. Davis, left, and Dr. Gerald Gable were among MSMA members attending the Technical Exhibit.



MSMA Auxiliary

Nancy Lindstrom, center front, is 1989-90 MSMA Auxiliary President. With her, from left, are: Beth Hartness, treasurer; Merrell Rogers, president-elect; Peggy Crawford, recording secretary; Peggy Hoover, fourth vice president; Kathy Carmichael, second vice president; Sylvia Walker, first vice president; and Karen Stephens, third vice president.



Past Presidents of the MSMA Auxiliary met for their annual breakfast during the Annual Session. Seated, left to right, are: Ruth Smith, immediate past president; Barbara Ross; Jo Waites; Peggie Herrington; and Nancy Lindstrom, current president. Standing, left to right, are: Carolyn Rogers; Jane Preston; Dottie Estes; Jean Hill; Martha Tatum; Barbara Blanton; Nancy Martin, Beth Hartness; Opal Dees; Dee Gaddy; and Martha Clippinger.



Dr. L. C. Henson comments on a matter before the House.



Dr. Alfio Rausa makes a statement to the House of Delegates



Dr. Joe Mitchell discusses a report under consideration.



Members of the House of Delegates prepare to mark their ballots.

121st Annual Session, May 31-June 4, 1989

HOUSE OF DELEGATES HANDLES BUSY AGENDA

The House of Delegates of the Mississippi State Medical Association handled a busy agenda of reports and resolutions at the 121st Annual Session, held in Biloxi.

The House of Delegates took these major actions:

- Approved the formation of a Coordinating Committee for Organized Medicine in Mississippi (i.e., MSMA, the MS Foundation for Medical Care and the Medical Assurance Company of MS).
- Removed a requirement in the MSMA by-laws that unified membership with the AMA cease after 1989.
- Established an Environmental Protection Committee to address environmental and waste disposal issues.
- Urged the AMA to assume a leadership role in developing methods to lower the cost of medical care which would be disseminated to the membership as continuing medical education.
- Requested MACM to advise on the potential effect of various tort reform measures on premium rates.
- Urged continued efforts to expand programs to care for the medically needy and uninsured, and urged the membership to participate in Medicaid and the association's Senior Care Program.
- Endorsed the appointment of specialty panels to advise on medical quality and utilization issues.
- Adopted a recommended format for visits of the MSMA president to component societies.
- Urged a study of the effectiveness of legislation to regulate entities performing utilization review.
- Approved criteria for establishment of a media awards program.
- Endorsed the association's working with other concerned organizations to stop the use of tobacco, and urged the Mississippi Department of Health to restrict the use of tobacco in health care facilities.
- Directed the association to join the Mississippi Department of Health in a program to reduce accidental injuries.
- Urged regulation of tanning parlors.
- Restated support for adequate funding of the office of State Medical Examiner.
- Urged a study of legislation to define qualifications of expert witnesses.
- Endorsed efforts of the Council on Medical Service to serve as a resource for development of local ethics panels.
- Urged blood services organizations in Mississippi to form an advisory committee composed of MSMA and MS Hospital Association representatives.
- Directed a study of hearing screening policies of the Mississippi State Department of Health by the association's specialty panels on EENT, pediatrics and family practice.
- Urged the AMA to seek repeal of federal legislation requiring nursing home patients to be screened for mental illness and mental retardation.
- Presented checks totalling over \$29,000 to the University of Mississippi School of Medicine. The gifts represent unrestricted and medical education AMA-ERF contributions by Mississippi physicians and spouses.

121st Annual Session Continued

Serving on Reference Committees of the House were:

Reference Committee on Rules and Order of Business

C. R. Jenkins, M.D., Chairman
Eric T. Baumgartner, M.D.
James O. Stephens, M.D.

Reference Committee A (Reports of Officers, Board of Trustees and Councils)

Hugh A. Gamble, II, M.D., Chairman
John D. Bower, M.D.
W. Joseph Burnett, M.D.
William E. Godfrey, M.D.
Frank G. Martin, M.D.

Reference Committee B (Reports of Officers, Board of Trustees and Councils)

John R. Shell, M.D., Chairman
Elmo P. Gabbert, M.D.
R. Ray Lyle, M.D.
Timothy J. Alford, M.D.

Credentials Committee

Don Q. Mitchell, M.D., Chairman
J. T. Davis, M.D.
Barry Holcomb, M.D.

Reference Committee on Constitution and Bylaws

Max L. Pharr, M.D., Chairman
Dayton E. Whites, M.D.
Eric E. Lindstrom, M.D.

Nominating Committee

Mal G. Morgan, M.D., Chairman
Ed Hemness, M.D.
William B. Hunt, M.D.
T. Steve Parvin, M.D.
Julian C. Henderson, M.D.
Dewitt Crawford, M.D.
Eric Lindstrom, M.D.
Roy D. Duncan, M.D.

**122nd Annual Session
May 30-June 3, 1990
Jackson, MS**



Dr. Max Pharr presented the report of the Reference Committee on Constitution and Bylaws.



Dr. Hugh Gamble, II, served as chairman of Reference Committee A.



Dr. John Shell served as chairman of Reference Committee B.



Members of the House of Delegates mark their ballots.

President's Reception



Dr. and Mrs. Steckler greeted MSMA members and guests attending the President's Reception at Gulf Marine State Park.



Pictured at the seaquarium at Gulf Marine State Park were, from left: Dr. W. Bernard Hunt, Dr. Swink Hicks, Dr. Ralph Brock, and Dr. J. Edward Hill.



Dr. Eric Lindstrom and his wife, Nancy, were among those enjoying the seafood buffet at the President's Reception.



Among those enjoying the President's Reception were, from left: Dr. Don Mitchell, MSMA secretary-treasurer; Dr. Joe Burnett, past president; and Dr. Gerald Gable, past president.



Dr. and Mrs. George Ball, left, were pictured as they spoke with Mr. and Mrs. Alvis Hunt of Trustmark, sponsors of the President's Reception.

"Swamp Party"



Enjoying the costumes, music and buffet were these "Swamp Party" guests. From left are Dr. and Mrs. Austin Boggan and Dr. James O. Stephens.



Dr. Stanley Hartness captured first prize in the "Swamp Party" costume contest. Some spectators described his costume as typical of today's physician — "up to part of our anatomy in alligators."



Dr. and Mrs. Alex Baines won second place in the "Swamp Party" costume competition. Mrs. Baines, with her cap adorned with swamp critters, is pictured with Mary Strauss, AMA Auxiliary President.



Even a red wig failed to conceal the identity of MSMA Executive Director Charles Mathews, pictured here with his wife, Phoebe.

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Delegates mark their ballots during the final session.



Members of the House of Delegates conclude their business.



Delegates pictured at the final session of the House.



Dr. Hill presented outgoing president (and gourmet) Dr. Steckler with a chef's hat and favorite wine.



Dr. Hill and Dr. Steckler model the lobstermen's caps presented to them by Dr. McAfee of Portland, Maine, who represented the AMA at the Annual Session.



Dr. and Mrs. Ed Hill, pictured as they begin a busy year as medical presidents — he of the MSMA and Jean of the AMA Auxiliary.

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David Steckler, Jr., was a trophy winner in the Annual Session's Fishing Rodeo.



Dr. David Richardson, above, and Dr. Robert Lott, below, display trophy-winning catches in the fishing rodeo.



DEATHS

CHUSTZ, JAMES A., Jackson. Born Erwinville, LA, Feb. 17, 1914; M.D., Tulane University School of Medicine, New Orleans, 1937; interned and medicine residency, Charity Hospital, New Orleans, 1938-41; died May 16, 1989, age 75.

DONALDSON, JAMES B., Laurel. Born Rockwood, TN, June 1, 1911; M.D., Vanderbilt University School of Medicine, Nashville, 1939; interned, one year, U.S. Marine Hospital, Stapleton, NY; EENT residency, U.S. Marine Hospital, Norfolk, VA, and New York and Louisiana, 1941-42 and 1947-48; died May 16, 1989, age 77.

SUTTON, BRUCE M., Jackson. Born Chelsea, MA, Jan. 8, 1920; M.D., Tufts College Medical School, Boston, 1945; interned one year U.S. Naval Hospital, Chelsea, MA; medicine residency, U.S. Veteran's Hospital, Van Nuys, CA, 1946-49 and Peter Bent Brigham Hospital, Boston, MA; psychiatric residency, Westborough and Worcester State Hospital, Massachusetts; died June 5, 1989, age 69.

NEW MEMBERS

BLAKE, GREGORY H., Jackson. Born Roswell, NM, May 6, 1951; M.D., University of Texas Southwestern Medical School, Dallas, 1977; interned and family medicine residency, Dwight David Eisenhower Army Medical Center, Ft. Gordon, GA, 1977-80; elected by Central Medical Society.

BOSWELL, SCOTT HULL, Ackerman. Born Dekalb, MS, Dec. 10, 1955; M.D., University of Mississippi School of Medicine, Jackson, 1982; interned one year, University of Arkansas, Little Rock; elected by North Central Medical Society.

CLINGAN, ROBERT C., Vicksburg. Born Canton, MS, Sept. 7, 1937; M.D., University of Mississippi School of Medicine, Jackson, 1962; interned and dermatology residency, Brooke General Hospital, San Antonio, TX, 1962-63, 1965-66, and 1967-70; elected by West Mississippi Medical Society.

DUDLEY, PATRICIA L., Meridian. Born Lake Charles, LA, June 28, 1956; M.D., University of Mississippi School of Medicine, Jackson, 1982; interned and

NEW MEMBERS/Continued

psychiatric residency, Tulane Medical Center, New Orleans, 1982-86; elected by East Mississippi Medical Society.

HIRSCH, DAVID I., Hattiesburg. Born Newport, NH, Aug. 2, 1939; M.D., University of Vermont College of Medicine, Burlington, 1965; interned one year, Denver General Hospital, Denver, CO; medicine residency, St. Joseph Hospital, Denver, 1968-72; nephrology fellowship, Cedars Sinai Hospital, Los Angeles, one year, and Wadsworth V.A. Hospital, Los Angeles, one year; elected by South Mississippi Medical Society.

REYNOLDS, TIMOTHY J., Greenwood. Born Newton, MS, June 16, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned and medicine residency, Emory University, Atlanta, GA, 1984-88; elected by Delta Medical Society.

THOMAS, STEPHEN R., Gulfport. Born Denver, CO, April 10, 1938; M.D., Tulane University School of Medicine, New Orleans, 1963; interned Fitzsimons General Hospital, Denver, CO, one year; or-

thopaedic surgery residency, Brooke Army Medical Center, San Antonio, TX, 1966-70; fellowship, joint replacement, San Francisco Medical Center, San Francisco, CA, 1978-79; elected by Coast Counties Medical Society.

TOLCHIN, ALAN JEFFREY, Madison. Born New York, NY, July 23, 1948; M.D., University of Mississippi School of Medicine, Jackson, 1974; diagnostic radiology residency, Philadelphia, PA, 1976-77, Jewish Hospital and Medical Center, Brooklyn, NY, 1977-79 and Beth Israel Medical Center, New York, NY, 1979-80; elected by Central Medical Society.

UNDESSER, ERIC KARL, Jackson. Born Baltimore, MD, April 19, 1953; M.D., University of Texas Health Science Center, San Antonio, 1984; interned and neurology residency, same, 1984-88; elected by Central Medical Society.

WILLIAMSON, AUBREY DUANE, Jackson. Born Greenville, MS, May 19, 1955; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned and anesthesiology residency, University Medical Center, Jackson, 1984-88; elected by Central Medical Society.

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Medical Director

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PERSONALS

BRUCE ATKINSON of Jackson has been elected a fellow of the American College of Cardiology.

ROBERT H. BARNES of Natchez has been named chairman of the Natchez Advisory Board of Deposit Guaranty National Bank.

HARRIS G. BARRETT of Pascagoula has been awarded a Certificate of Added Qualifications in Geriatric Medicine by the American Board of Family Practice and the American Board of Internal Medicine.

WILLIAM BECKMAN of Jackson led a public education seminar on "The Effects of Diabetes on Mothers and Their Babies."

CHRIS BENSON of Hattiesburg made a presentation on fibrositis at a meeting of the Arthritis Support Group at the Institute for Wellness and Sports Medicine.

BERTIN CHEVIS of Bay St. Louis has been recertified by the American Academy of Family Physicians.

ROBERT COLTHARP of Hattiesburg recently was inducted as a fellow of the American Society for Head and Neck Surgery at the society's meeting in San Francisco.

STEPHEN CONERLY of Hattiesburg was speaker at a lifestyle enrichment program sponsored by Forrest General Hospital.

A. DEAN CROMARTIE of Hattiesburg was speaker at a Women's Health Symposium sponsored by Methodist Hospital of Hattiesburg.

RICHARD J. CUNNINGHAM has associated with the Hattiesburg Clinic for the practice of family medicine at Wiggins Clinic.

RICHARD J. FIELD, JR. of Centreville spoke at American College of Surgeons meetings in Rapid City, North Dakota and Mobile, Alabama, and is scheduled to testify on rural health issues before the National Advisory Council on Rural Health in Washington, DC, with Dr. Paul Ebert, director of the American College of Surgeons.

JACK HUDSON of Hattiesburg spoke on hypertension at a public education seminar sponsored by Forrest General Hospital.

FREDERICK R. HUNT of Meridian announces his retirement from the practice of medicine.

JOE JOHNSTON of Mt. Olive, JOHN B. LEVENS of Bay St. Louis, and RODNEY LOVITT of Petal have completed continuing education requirements to retain membership in the American Academy of Family Physicians.

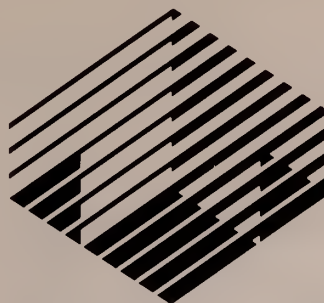
GEOFFREY B. HARTWIG of Hattiesburg spoke at a recent meeting of the Laurel Area Epilepsy Support Group.

GEORGE MOLL of UMC participated in a conference for the Medical Research Center in Washington, DC, where he also represented UMC at a meeting of the Southern Society for Pediatric Research.

FRANK MORGAN of Jackson was elected vice-chairman of the FLEX board at the recent annual meeting of the Federation of State Medical Boards in Chicago.

TOXEY MORRIS of Hattiesburg was speaker at a Women's Health Symposium sponsored by the Methodist Hospital of Hattiesburg.

FRANCIS MORRISON of UMC attended the National Blood Resource Education program in Arlington, Virginia.



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PERSONALS/Continued

SHANTI PANDEY of Fayette has completed continuing medical education requirements to retain membership in the American Academy of Family Physicians.

W. H. PARKER of Heidelberg announces his retirement from the practice of medicine.

JOHN M. PATTERSON of Pontotoc has been named a fellow of the American Academy of Family Physicians.

CHARLES PRUITT of Magee has completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians.

THOMAS G. PUCKETT of Hattiesburg was named a diplomate of the American Board of Medical Management during the national conference of the American College of Physician Executives.

SESHADRI RAJU of UMC spoke at the Vascular Access Surgery — Complications and Revisions meeting in Brooklyn, New York.

SUSAN L. ROBBINS has associated with the Hattiesburg Clinic for the practice of pediatrics.

JULIAN F. ROSE has associated with Internal Medical Associates in Meridian for the practice of internal medicine.

HENRY SANDERS of McComb has been appointed to a three-year term as a director of the University of Mississippi Medical Alumni Association.

CLIFFORD SEYLER of Pascagoula has been named PTA Volunteer of the Year, receiving the Oak Leaf Award presented by the Mississippi Congress of Parents and Teachers.

JOHN G. SHIELDS of Ackerman has been named a fellow of the American College of Obstetricians and Gynecologists.

GENE SPEED announces the opening of his office for the practice of general and family medicine at Doctors Professional Office Building in Sardis.

JAMES O. STEPHENS of Magee has completed continuing medical education requirements to retain membership in the American Academy of Family Physicians.

DAVID TEMPLE of Jackson was speaker at a public education seminar on diabetes management at Hinds General Hospital.

RALPH VANCE of UMC has been named chief of staff at the medical center. JOE FILES is vice chief and WINSOR MORRISON is secretary.

RICHARD VISE of Meridian presented a program for the Lions Club of Quitman.

JESSE WILLIAMS of Columbus spoke on "AIDS in the Black Community" at the Youth Awareness Service of United Christian M.B. Church.

BUFORD YERGER of Jackson recently was named Professor of the Year at UMC's awards day.

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Mississippi Lung Association
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University of Mississippi Medical Center

Registration:

Pre-Registration deadline August 10, 1989

Symposium fees	Pre-Registration	On-Site
Physicians	\$75	\$90
Nurses, Fellows, & Residents	\$50	\$65
Others	\$45	\$55

Refund Policy:

Requests for refunds must be made in writing and received in the Tuberculosis Program office on or before August 15, 1989.

A \$25 handling fee will be withheld from refunds.

Continuing Medical Education Credit:

As an organization accredited for Continuing Medical Education, the University of Mississippi School of Medicine designates this continuing medical education activity as meeting the criteria for 11.25 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association, provided it is completed as designed. The University of Mississippi Medical Center Division of Continuing Health Professional Education will award 1.1 continuing education units (CEU) to all registrants completing the workshop.

Nursing: 15.0 contact hours of continuing nursing education have been approved by the Mississippi Nurses Association.

Overnight Accommodations:

Special rates of \$33 for a single or double room are available for symposium participants. Ask for the Tuberculosis Program's room block to qualify for the special rate. This special rate has been extended by the Natchez Eola to include the dates of August 19-27.

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Medico-Legal Brief

State Not Liable For Releasing Patient Who Later Shot Victims

The state and state mental health professionals were immune from liability for recommending unconditional release of a patient who later shot several people, a Washington appellate court ruled.

In May 1971, the patient was committed to a state hospital as a criminally insane person after acquittal of the charge of second-degree murder of his estranged wife. On the basis of recommendations by mental health professionals, the court ordered his conditional release in September 1973. In April 1975, the court entered a final unconditional discharge order releasing the patient when hospital staff members recommended such release after an evaluation.

The patient subsequently became engaged. In December 1985, his fiancée broke off the engagement. In January 1986, the patient entered the place where the women worked and resided. He shot and killed her and another woman and wounded two other people.

In an action against the state and several mental health professionals, it was alleged that they were liable for the shooting incident. The trial court dismissed the complaint.

On appeal, it was contended that in enacting the applicable law, the legislature intended to impose liability on state employees to protect identifiable victims from violent behavior by mental patients. However, the court pointed out that no evidence was offered that the statute was intended to apply to procedures affecting patients who had been criminally committed.

The court said that mental health providers appointed by a court to give an advisory opinion on a criminal defendant's mental condition were acting as an arm of the court and protected by absolute judicial immunity. In the present case, the professionals were appointed by statute instead of directly by the court. However, under both sets of circumstances the court took the evaluation by the professional under advisement but made its own decision. Therefore, the court found that the trial court did not err in granting summary judgment on the basis of judicial immunity. — *Tobis v. State of Washington*, 758 P.2d 534 (Wash.Ct. of App., Aug. 10, 1988)

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Brief Summary

Consult the package literature for complete information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks. Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg b.i.d. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H₂-receptor antagonists.

Precautions: General – 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests – False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions – No interactions have been observed between Axid and theophylline, chlorazepate, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,300 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility – A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls. The human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 5.0 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Adverse Reactions – Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk; proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use – Safety and effectiveness in children have not been established.

Use in Elderly Patients – Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions – Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying duration. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events were also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic – Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular – In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS – Rare cases of reversible mental confusion have been reported.

Endocrine – Clinical pharmacology studies and controlled clinical trials showed no evidence of androgenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecostasia occurred.

Hematologic – Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H₂-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumentary – Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity – As with other H₂-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H₂-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other – Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms – There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg, respectively.

Treatment – To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the Physicians' Desk Reference (PDR). In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

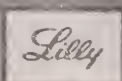
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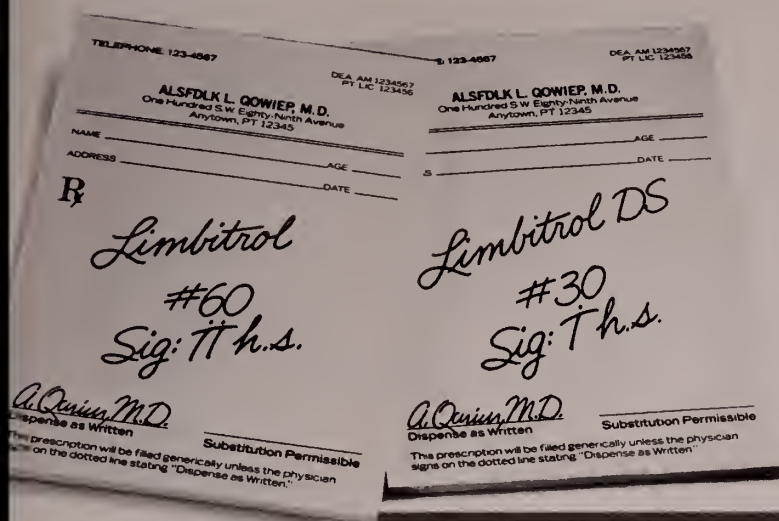


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Usage in Pregnancy: Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations. Consider possibility of pregnancy when instituting therapy.

Withdrawal symptoms of the barbiturate type have occurred after discontinuation of benzodiazepines (See Drug Abuse and Dependence).

Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

Adverse reactions not reported with Limbitrol but reported with one or both components or closely related drugs: **Cardiovascular:** Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke. **Psychiatric:** Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania, increased or decreased libido. **Neurologic:** Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns. **Anticholinergic:** Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract. **Allergic:** Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus. **Hematologic:** Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia. **Gastrointestinal:** Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue. **Endocrine:** Testicular swelling, gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion. **Other:** Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Drug Abuse and Dependence: Withdrawal symptoms similar to those noted with barbiturates and alcohol have occurred following abrupt discontinuance of chlordiazepoxide; more severe seen after excessive doses over extended periods; milder after taking continuously at therapeutic levels for several months. Withdrawal symptoms also reported with abrupt amitriptyline discontinuation. Therefore, after extended therapy, avoid abrupt discontinuation and taper dosage. Carefully supervise addiction-prone individuals because of predisposition to habituation and dependence.

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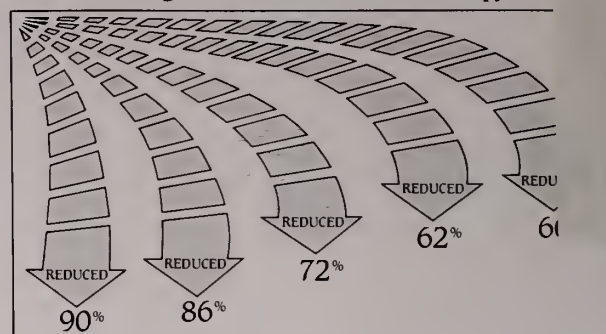
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JOURNAL

OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

AUGUST

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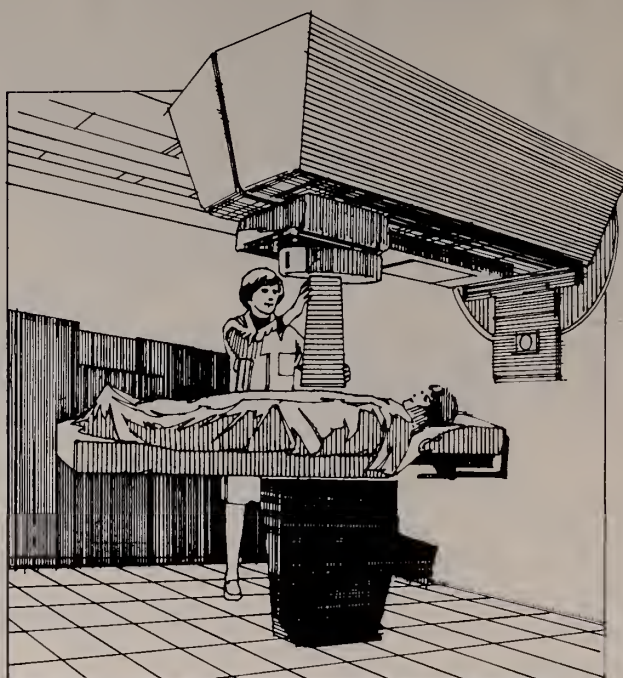
Executive Director

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NEWSLETTER

August 1989

Dear Doctor:

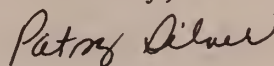
The controversial proposal to limit future growth in Medicare spending for physician services by expenditure targets received the blessing of the House Ways and Means Committee by a vote of more than 2-1 in mid-July. The proposal was protested by the AMA House of Delegates at its annual meeting in June, and the association was directed to launch a major education campaign informing the public that expenditure targets mean rationing.

Responding to the House committee action, Joseph T. Painter, M.D., vice chairman of the AMA Board of Trustees, charged that "what committee members have voted for, without public debate and behind closed doors, is nothing less than a healthcare rationing scheme." He expressed dismay that "a country as wealthy as the United States" would consider rationing healthcare, and predicted that recent senior citizen outrage over the supplemental premium cost of the catastrophic coverage bill would be dwarfed by their protesting of a rationing system.

Along with approval of a campaign concerning expenditure targets, the AMA House also approved a public information campaign emphasizing the advantages of American medicine. The action arose out of an AMA Board of Trustees report observing that American medicine is at a crossroads - one road leading to a nationalized system similar to Canada's and the other leading to a strengthened U.S. system. The campaign also will address reforms in Medicaid and Medicare and meeting the needs of the uninsured.

Improving your effectiveness through participation in the political process is the theme of a workshop for MSMA members and spouses, September 13 at the Ramada Renaissance Hotel in Jackson. Among topics are: "The Political Environment for Medicine - Why Grassroots Action is Necessary"; "Understanding the Legislative Process"; "Update on Key Issues Facing Medicine"; and a Case Study/Role Playing session. For information, contact your MSMA headquarters office.

Sincerely,



Patsy Silver
Managing Editor



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DATELINE

AMA House Adopts MSMA Resolutions

Chicago, IL - The MSMA House of Delegates presented three resolutions to the AMA House of Delegates, and all three were adopted at the AMA's recent annual meeting. The resolutions dealt with preadmission screening of nursing home patients, CME on costs of alternative medical treatment, and misleading language in Medicare's explanation of benefits.

Hospitals Report RN Vacancies Above 10%

Washington, DC - In a recent survey, 59% of hospitals reported vacancy rates above 10% for RNs, and many (19%) of the facilities reported RN vacancy rates above 20%. Hospitals in the Southeast had the worst shortages of RNs, with 68% of facilities in the area reporting vacancy rates above 10%. The 857 hospitals reporting also said that nurses are spending more than half their time doing non-nursing tasks.

Americans Look to AMA for Solutions

Chicago, IL - Results from the 1989 public opinion survey performed by the AMA's Office of Issue and Communications Research show that most Americans look to the AMA for workable health care policy developments. The survey involved 1500 U.S. adults. Physician organizations such as the AMA were mentioned more than twice as often as federal and state governments or insurance companies as trusted to find solutions.

ACS Report on Cancer and the Poor

Washington, DC - Despite advances in cancer treatment, 178,000 Americans will die this year from cancer that could have been treated successfully with earlier detection. So estimates the American Cancer Society in a recent report, which also stated many middle-class Americans are reduced to poverty by expense of cancer treatment, and the poor are forced to choose between food, shelter, and medical care.

Forum on AIDS And Hepatitis B

Chicago, IL - The AMA and 52 other health-related organizations are co-sponsoring the 4th National Forum on AIDS and Hepatitis B, November 19-21 in Washington, DC. The forum will examine strategies to control the spread of these bloodborne diseases by hospitals, labs and health care professionals. For information, contact the National Foundation of Infectious Diseases, (301) 656-0003.

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ORIGINAL PAPERS

Infant Hearing Screening In Mississippi

OJUS MALPHURS, JR., PH.D.

Jackson, Mississippi

"I am just as deaf as I am blind. The problems of deafness are deeper and more complex if not more important than those of blindness. Deafness is a much worse misfortune. For it means the loss of the most vital stimulus, the sound of the voice that brings language, sets thoughts astir, and keeps us in the intellectual company of man. . . ."

Helen Keller

THE ABILITY TO COMMUNICATE is man's most unique characteristic. Other animals have organs such as hearts, kidneys and lungs but only humans have the ability to communicate complex thoughts and engage in symbolic reasoning. This ability permits us to organize ourselves into societies, educate our young and plan for the future. Language and its expression through speech, writing, or manual signs is that part of us which makes us human.

Among the more common medical problems which interfere with the development of language is congenital sensori-neural hearing loss. This invisible handicap is often not recognized until two or three years of age when a child with a severe loss fails to develop speech. In a child with a mild to moderate hearing loss, identification of the problem frequently does not take place until the child has failed one or more grades in school. The need for early intervention with hearing impaired children has long been recognized as essential to language

Four national professional associations through their representatives on the Joint Committee on Infant Hearing have endorsed the importance of early identification of hearing impaired children. In this article the author reports on the past seven years of the Infant Hearing Screening Program at the University of Mississippi Medical Center. He notes that efforts are currently underway to extend the IHS Program to other hospitals in Mississippi in cooperation with the Lions Club. At the present time 22 hospitals have been equipped to screen hearing in infants.

development.¹ Recent studies in the literature further indicate the importance of early stimulation with environmental sounds on the maturation of the central auditory nervous system.² This research suggests that failure to provide amplification of sound for the hearing impaired child during the first few months of life may result in permanent physiological and anatomical deficits in the auditory CNS.

In 1982 the Joint Committee on Infant Hearing, consisting of representatives of the American Academy of Pediatrics, the American Academy of Otolaryngology, Head and Neck Surgery, the American Nurses Association, and the American Speech-Language-Hearing Association, issued a revised position statement.³ The new position statement listed

From the Department of Surgery, University Medical Center, Jackson, MS.

the following criteria for considering children at risk for hearing loss:

1. Family history of childhood hearing impairment.
2. Congenital perinatal infection (e.g., cytomegalovirus, rubella, herpes, toxoplasmosis, syphilis)
3. Anatomic malformations involving the head or neck (e.g. dysmorphic appearance including syndromal and nonsyndromal abnormalities, overt or submucous cleft palate, morphologic abnormalities of the pinna)
4. Birth weight less than 1500 grams
5. Hyperbilirubinemia at level exceeding indications for exchange transfusion
6. Bacterial meningitis, especially *Haemophilus influenzae*
7. Severe asphyxia which may include infants with Apgar scores of 0 to 3 or who fail to institute spontaneous respiration by ten minutes and those with hypotonia persisting to 2 hours of age.



Figure 1. Hospitals in Mississippi Participating in Lions Club Infant Hearing Screening Program

The Joint Committee further recommended that children at risk for hearing loss be screened by three months of age and that the diagnosis should be completed and habilitation begun by age six months.

At the University of Mississippi Medical Center, we have been involved in identification of hearing impaired infants for more than 20 years. In 1978 we reviewed the records of 140 hearing impaired children and found that in spite of our best efforts, only 5 percent were identified at less than one year of age and 10 percent by two years. Reports in the literature indicate that with few exceptions, our experience in identification of hearing impaired children is not appreciably different from that in other parts of the United States. Obviously, considerable improvement was needed in order to meet the goals of the Joint Committee on Infant Hearing.

In 1981 the Lions Clubs of Mississippi adopted infant hearing screening as a project and purchased a newborn hearing screening device known as a Crib-O-Gram for use in the Newborn Center of the University Hospital. The Crib-O-Gram was developed by F. Blair Simmons, M.D., head of the Division of Otolaryngology at Stanford University under a grant from the National Institutes of Health. This device monitors an infant's motion by means of a transducer placed under the mattress of a standard hospital bassinette. When the Crib-O-Gram records ten consecutive seconds of low level activity, a 3000 Hz narrow band noise signal is produced. The Crib-O-Gram then compares the infant's recorded activity level after the sound presentation to the activity level before the sound. After thirty trials, the Crib-O-Gram indicates whether the child passed the screening, i.e., post stimulus activity level was significantly different from prestimulus level, or should be referred for further testing. The equipment is relatively easy to operate and usually requires about three to five minutes of staff time per test. The screening procedure is automated and takes an average of a half-hour to complete 30 trials, depending on the activity level of the baby.

Over the past seven years, we have made several changes in screening procedures and equipment which have reduced the time needed to screen an infant, the number of false positives, and the number of incomplete tests. The most recent change was the donation by the Lions Club of equipment which measures brainwave activity in response to auditory stimuli, known as the Auditory Brainstem Response (ABR). This equipment provides a more accurate measurement of auditory status in infants referred by the Crib-O-Gram screening, and when used in the Newborn Center reduces the number of children

TABLE 1
RESULTS OF CRIB-O-GRAM SCREENING

<i>Year</i>	<i>Number Screened</i>	<i>Number Passed</i>	<i>Number Incomplete Tests</i>	<i>Number Referred</i>	<i>Hearing Impaired</i>
1981	333	262	29	42	2
1982	349	267	23	59	5
1983	375	286	10	79	5
1984	318	249	9	60	2
1985	252	206	9	37	1
1986	310	252	4	54	3
1987	<u>231</u>	<u>187</u>	<u>5</u>	<u>39</u>	<u>1</u>
TOTALS	2168	1709	89	370	19

TABLE 2
RESULTS OF ABR SCREENING

<i>Year</i>	<i>Initial ABR</i>			<i>Subsequent ABR</i>			<i>Hearing Impaired</i>
	<i>Test</i>	<i>Pass</i>	<i>Fail</i>	<i>Test</i>	<i>Pass</i>	<i>Fail</i>	
1986	40	25	15	8	5	3	3
1987	<u>24</u>	<u>16</u>	<u>8</u>	<u>8</u>	<u>7</u>	<u>1</u>	<u>1</u>
TOTALS	64	41	23	16	12	4	4

requiring follow-up evaluations. Though false positives remain a problem (primarily due to the neurological immaturity of the infants screened and transient middle ear effusion), we are currently finding one hearing impaired child for every four who fail a Crib-O-Gram screening and ABR. Results of the infant hearing screening program at the University Hospital to date are summarized in Tables 1 and 2.

In addition to these efforts at the University Hospital, the Lions Clubs of Mississippi have placed Crib-O-Grams in 21 other hospitals over the past seven years. In 1987 these hospitals, whose locations are shown in Figure 1, had 27,902 live births or 69.3 percent of all births in Mississippi. They screened 6,309 infants or 15.7 percent of children born in the state that year. In comparison, estimates place the number of infants screened for hearing loss at less than 5 percent for the United States.⁴

Though the Infant Hearing Screening Program in Mississippi is one of the most extensive hospital based programs in the United States, it has not yet reached its full potential because of limited follow-up on children referred by the screening. To some extent this may be attributable to the fact that only one civilian hospital in Mississippi, the University

Hospital, has audiologists to supervise screening of babies and provide follow-up evaluations. An additional problem may be lack of awareness of the prevalence of hearing loss in very young children and of techniques for evaluating hearing in this population. This viewpoint is supported by data from Medicaid indicating that out of 13,195 children under age one year screened in 1987, only eight were referred for hearing problems.

Research clearly demonstrates the benefits and cost effectiveness of early intervention for handicapped children. These benefits have also been recognized at both the national and state government levels. In 1986 the Congress of the United States passed P.L. 99-457 which provides incentives and funding to states to serve the needs of preschool handicapped children. As early as 1973, a subcommittee of the Mississippi Legislature identified the need for early intervention for hearing impaired and visually impaired children and recommended a "method of early detection and registration" of children with these handicaps. Unfortunately, even though a registry law was passed, the registry was never established because the technology and financial resources were not available at that time.

Recent developments in electronics have now

INFANT HEARING/Malphurs

provided the technology for screening hearing in infants. Thanks to the leadership of the Lions Clubs, this technology is already available in hospitals where most of the babies in Mississippi are born. We also have the resources potentially available to coordinate screening activities and follow-up services through various early education and health programs. Mississippi is currently leading most other states in hospital-based infant hearing screening because of the cooperation of the Lions Clubs and community hospitals of this state. Maintaining this lead in the future will depend upon support from

state agencies with the resources and responsibilities for serving hearing impaired children. Fortunately, in this area of health care, the challenge is not whether Mississippi can avoid being last, but can we be first. ★★★

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Evaluation of the Shoulder: Examination in Throwing Athletes

FELIX H. SAVOIE, M.D.

Jackson, Mississippi

INCREASING INTEREST has been focused upon disorders of the shoulder, and the recent advances in management of these disorders in the athlete. These unique individuals often require specialized care in the diagnosis and management of the problems inherent to their profession. The added stress placed on the shoulder joint in throwing athletes often leads to injuries. The short term powerful contractions of the extrinsic muscles about the shoulder joint result in adaptive changes that should not be confused with pathologic conditions. However, these adaptive changes often predispose the shoulder to more serious injury. In addition, the lack of understanding of the basic mechanics of the shoulder by many of the athletes in the younger age groups often leads to acute injury as well as to faulty rehabilitation and development of a chronic injury state. This report represents the first in a series of articles concerning the examination, diagnosis, and management of disorders of the shoulder.

An accurate history is invaluable in the evaluation of the throwing athlete. Just as a physical examination follows a systematic pattern, the history taken by the physician should likewise follow a similar pattern. The initial episode of injury or onset of pain should be thoroughly evaluated. In addition, the persistence of the pain and its association with specific activities should also be elucidated. An attempt should be made to determine whether the pain is in the acceleration or deceleration phase of throwing. Careful questioning can direct the examiner's attention to the anterior capsular structures, toward the rotator cuff, to the posterior structures, or to the glenohumeral articulation itself. For example, a his-

The shoulder has been the subject of many recent advances in orthopaedic surgery. Arthroscopic evaluation of the glenohumeral joint and subacromial bursa has enabled the physician to increase both diagnostic and management skills. In Part I of this series, the author presents an illustrated examination of the shoulder. A thorough history and comprehensive examination may lead to an accurate diagnosis and management plan, obviating the need for expensive ancillary procedures.

tory of an anterior pop or a clunk in certain motions may indicate a labral tear, whereas a burning-type pain noted primarily after releasing the ball would be more indicative of a rotator cuff tear. Any history of previous treatment should also be obtained, as well as the response to such treatment.

The physical examination begins with inspection. The throwing shoulder should be compared with its opposite member for evidence of asymmetry, muscle hypertrophy or atrophy. In the athlete who has been involved in the throwing motion over an extended period, muscle hypertrophy should be readily apparent. Next, the active range of motion (ROM) in the shoulder should be obtained. As before, the throwing shoulder should be compared to that on the opposite side. Careful observation from the posterior aspect of the patient permits the differentiation of glenohumeral motion from scapulothoracic motion. The sternoclavicular joint, acromioclavicular joint, and glenohumeral joint should all be observed anteriorly during the ROM of the shoulder. If there

From the Department of Orthopaedic Surgery, University Medical Center, Jackson, MS.



1-A



1-B

Figure 1: Translation of the shoulder is evaluated by grasping the humeral head in one hand and the anterior and posterior borders of the acromion with the other. An anterior (A) and posterior (B) force is then applied to the humeral head to sublunate it in these directions. It is normal for the humeral head to sublunate 50% of its diameter posteriorly during this maneuver.



Figure 2: The superior surface of the supraspinatus muscle is evaluated by placing the arm in 90 degrees of abduction, 30 degrees of flexion, and then full internal rotation, positioning the superior edge of the tendon against the coraco-acromial ligament.



Figure 3: In the same position as in Figure 2, a downward force is applied to the arm by the examiner. Weakness to this pressure may indicate a tear or tendinitis of the superior rotator cuff.

is a discernible difference in motion between the two shoulders, a manual or passive ROM is then obtained and the differences are noted. Palpation is then used about the contours of the shoulder to determine points of tenderness. Pain may be localized by palpation to the acromioclavicular joint, the anterior capsule, the environs of the rotator cuff, or the posterior shoulder. Anterior-posterior translation of the shoulder joint can then be tested (see Figures 1 A-B). It is normal for the shoulder to subluxate posteriorly approximately 50% of the diameter of the humeral head. This subluxation may be more pronounced in the throwing athlete. Anterior subluxation, however, should be minimal. Pain on anterior translation of the humeral head on the glenoid may indicate labral tear or anterior shoulder instability.

Evaluation of the supraspinatus musculature is performed by abducting the shoulder 90 degrees and placing it in 30 degrees of forward flexion. This maneuver is initially accomplished in neutral rotation. The shoulder is then fully internally rotated (see Figure 2). Pain accompanying this motion may indicate a superior surface supraspinatus tear. The patient is asked to maintain the arm in this position as the examiner exerts a downward force (see Figure 3). This same procedure is repeated on the opposite side; comparative weakness or increased pain may indicate either a partial or full thickness rotator cuff tear. The same test is repeated with the arm externally rotated. Pain or weakness in this position may also indicate a rotator cuff tear or bicipital tendon lesion (see Figure 4).

The arm is then fully abducted overhead in the internally rotated position to evaluate for impingement of the rotator cuff on the underside of the acromion. A second impingement test is performed by placing the shoulder in 90 degrees of abduction and 30 degrees of forward flexion. The shoulder is fully internally rotated from the fully externally rotated position, bringing the greater tuberosity of the humeral head under the coracoacromial ligament (see Figures 5 A-B). Pain during this motion is indicative of an impingement problem.

Initial evaluation of anterior stability is accomplished in a sitting position by fully extending the shoulder and placing it in abduction and external rotation (see Figure 6). Acute pain and apprehension in this position indicates anterior instability. Diffuse pain may indicate a rotator cuff tear. Inferior instability is tested with the arm in 90 degrees of abduction and the elbow flexed. The examiner exerts a downward force on the shoulder to check the inferior capsular structures (see Figure 7). Alterna-



Figure 4: The arm is externally rotated from the position in Figure 3 and a downward force is applied. The anterior rotator cuff and the biceps tendon resist this force.

tively, these structures may be evaluated with the arm hanging at the side while the examiner applies a downward force. The shoulder is observed for any appearance of a sulcus around the inferior edge of the acromion, commonly seen in multi-directional instability problems. The arm is then placed in flexion and internal rotation and 90 degrees of abduction. A posterior force is then applied to the shoulder (see Figure 8). Pain, apprehension, or instability during this test may indicate posterior instability.

The biceps tendon is then re-examined with the elbow in full extension and in varying degrees of flexion by the athlete resisting an extension force applied by the examiner. Pain or tenderness noted in the anterior area of the shoulder during this maneuver may indicate a partial tear of the biceps or detachment of the superior glenoid labrum.

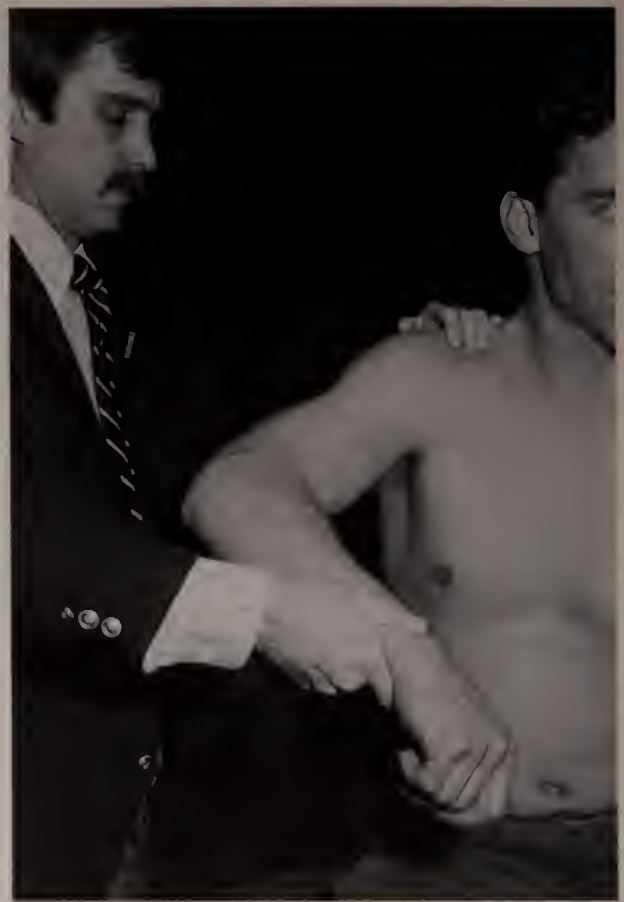
The acromioclavicular joint and sternoclavicular joints are evaluated by flexing the arm across the chest in 90 degrees of abduction (see Figure 9). Pain in the area of these joints during this maneuver is indicative of pathology.

The patient is then asked to assume a supine position, and the tests for anterior and inferior instability are repeated. The arm is abducted 90 degrees and the humeral head is subluxated anteriorly and posteriorly with rotation of the humerus. A clunk or pop within the shoulder joint during this test may indicate a labral tear (see Figure 10).

The patient is then placed in the prone position with the hands fully internally rotated and asked to perform a push-up. This maneuver further evaluates the posterior shoulder capsule and posterior musculature for any evidence of instability. A patient with true posterior instability will be unable to perform a push up in this position.



5-A



5-B

Figure 5: In a second impingement test, the rotator cuff is pinched between the greater tuberosity of the humeral head and the acromion. The arm is placed in 90 degrees of abduction, 30 degrees of flexion, and full external rotation (A). The shoulder is then fully internally rotated (B). Pain generated by this maneuver is indicative of an impingement disorder.



Figure 6: Anterior shoulder instability is evaluated by placing the arm in abduction and external rotation. Pain or apprehension may be felt anteriorly as the shoulder subluxates in this direction.



Figure 7: The inferior capsular structures are tested by placing the shoulder in 90 degrees of abduction, flexing the elbow, and applying a downward force to the humerus. Inferior displacement of the head leaves an indentation (sulcus sign) below the acromion.



Figure 8: The shoulder is tested for posterior stability by placing the arm in 90 degrees of frontal flexion, full internal rotation, and applying a posterior force. In this position the capsule has been tightened and any subluxation should be considered abnormal.



Figure 10: The "clunk" test is performed by internal and external rotation of the shoulder while the patient is supine and the shoulder abducted 90 degrees. A clicking or popping in the shoulder is indicative of a labral tear.



Figure 9: The acromioclavicular and sternoclavicular joints are evaluated by flexion of the arm across the chest.

Standard radiographs complete the initial evaluation of the shoulder in the throwing athlete. An internal and external rotation view, axillary lateral view, and a lateral scapular view should be taken in each case for adequate evaluation of the glenoid, the inferior surface of the acromion, the acromioclavicular joint, and the humerus.

A corollary to the evaluation of the shoulder joint is an adequate evaluation of the neck and cervical spine area and the entire upper extremity including the elbow, wrist, and hand. Pain perceived in the shoulder area may actually be referred from other areas.

When the examination is completed, the physician should have a provisional diagnosis and a management plan should be formulated. Ancillary tests, e.g., ultrasound or magnetic resonance imaging scan, may be useful in evaluating the structures of the shoulder. Arthrograms are not performed routinely except in selected instances.

Nonoperative management is most often the initial choice in many shoulder disorders. Adequate rehabilitation, stressing the internal and external rotators and avoiding abduction, is an essential part of the program. Specific disorders and their management will be presented in Parts II through III of this series.

★★★

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SUGGESTED READING

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Dr. A. C. Guyton: Builder

JANIS QUINN

Dr. Arthur Guyton and his wife Ruth returned most recently to their home in Jackson in April.

They came back from Spain where Dr. Guyton, chairman of physiology and biophysics at the University of Mississippi Medical Center, received an honorary degree from the ancient University of Murcia.

Over the years, he and Ruth have come back to that house — designed by Dr. Guyton to accommodate him, Ruth and 10 children — from around the world, anywhere there are scientists to acknowledge their debt to him.

If anyone could choose where in the entire world he wants to teach and do research, it is Arthur Guyton. But he always comes back to the state which has been home to his family for generations. His grandfather raised his family in a small community near New Albany and Blue Mountain. His father, the late Dr. Billy Guyton, was an eye, ear, nose and throat specialist in Oxford and dean of the two-year medical school at the University from 1936-1943. Dr. Guyton grew up in Oxford, graduated from Ole Miss at the top of his class, and went to medical school at Harvard where he earned the M.D. in 1943.

In September, when he reaches 70, he'll retire from his current post. But not before the citizens of Mississippi throw him a party in gratitude for his life's work. August 25 will be Arthur C. Guyton Day in Mississippi. It will be a celebration of science because the man to be honored "is one of the true luminaries of 20th century science," according to Dr. Norman C. Nelson, vice chancellor for health affairs at UMC. Dr. Guyton has made fundamental contributions to what we know about the way the human body works and to our ability to treat such conditions as congestive heart failure, high blood pressure and heart attack."

Dr. Guyton's contributions to science, specifically to the field of cardiovascular physiology, are

From the Department of Public Information, University Medical Center, Jackson, MS.

Dr. Arthur C. Guyton will retire in September from his post as chairman of physiology and biophysics at the University of Mississippi Medical Center. Mississippians will mark the occasion by paying tribute to his life's work on Arthur Guyton Day, August 25. The event is described as a "celebration of science," because the man being honored "is one of the true luminaries of 20th century science."

described in more than 500 scientific papers and 30 books of which he is the author or co-author. It all started as an interest in high blood pressure (hypertension) while he was still a medical student. "At that time," he says, "little could be done for patients with high blood pressure." As a promising 27-year old surgery resident at Massachusetts General Hospital, he worked with the eminent surgeon Dr. Reginald Smithwick who was working on the problem of how the nervous system controlled blood pressure. He helped Smithwick surgically remove the sympathetic nerves from a number of patients with severe hypertension. "Dr. Smithwick learned later, that even though the patients lived longer, the surgery only caused a temporary lowering of blood pressure."

When he was stricken with polio in 1946, his surgical career came to an end. The disease left his right leg and left upper arm and shoulder paralyzed. After recuperating in Warm Springs, Georgia, he returned to Oxford and devoted himself to teaching and basic research — still interested in finding out what caused hypertension.

He did studies determined to show how the nervous system controlled blood pressure. He discovered it wasn't the main controller. "It only took a few weeks to make that discovery," he said. The nervous system is "beautiful" at giving a great surge in pressure, but he found quickly that other systems

were at work in keeping blood pressure regulated over a long period.

In those early months at the University he realized that he was going to have to shelve his interest in hypertension temporarily. "We didn't even know what controlled cardiac output. How could we know what controlled blood pressure without first understanding a whole lot of other things, then unknown, about the cardiovascular system."

"Dr. Guyton's contributions to science, specifically to the field of cardiovascular physiology, are described in more than 500 scientific papers and 30 books of which he is the author or co-author."

And so he began, systematically chipping away at the unknown. He developed the concept of the "permissive heart," according to Dr. John Hall, professor and vice chairman of the department. "The concept states that the heart can only pump what is returned to it; that cardiac output is regulated by the need of body tissues for oxygen. The concept brought together all the variables of the system. It is a systematic explanation."

He established, with a device he invented, that interstitial fluid has a negative pressure. Interstitial fluid is that which exists between and around the cells. Dr. Hall thinks it may be one of his most important accomplishments because it led to an understanding of what controls tissue fluid which, in turn, elucidated the disease process in such conditions as congestive heart failure.

When he finally got back to hypertension in the early 70s, he and his colleagues in the department developed the concept of the kidney as the "servo controller" of blood pressure. Of all the factors that can affect blood pressure, the kidneys can override them all. The kidneys are the ultimate control over blood pressure.

These contributions alone would have guaranteed him a place in the history of scientific thought. But Dr. Guyton is almost as well known for his "way of thinking" about physiology.

Dr. Hall said, "He teaches a systems approach to problems. It's a difficult method, but once you master that way of thinking about physiological problems, you realize that you have a far better, deeper understanding than physiologists who haven't trained this way."

The systems approach means understanding the relationship of many variables simultaneously — a

function of the human brain which can be done by computers with much greater ease. But Dr. Guyton had to wait for computer technology to catch up with him. Dr. Allen Cowley, chairman of physiology at the Medical College of Wisconsin, post-doctoral fellow in the department and member of the faculty for 11 years, remembers the department's first big computer model of the cardiovascular system in the 1960s. "Much to the chagrin of the rest of the world, Guyton had found a way to express all the factors related to arterial pressure at one time."

Since the arrival of the first computer in the early 60s, the department has become the world's headquarters for the computer simulation of body function and home to the world's most comprehensive computer model of the cardiovascular system.

The computer can hold and retrieve all the measurements derived from the department's animal studies — how thick, how much pressure, how much fluid, how much resistance, how much force, how much oxygen. To the chairman, the real "truth" of physiology is best described quantitatively in the language of physics, mathematics and chemistry.

It is the quantitative, systematic method which he teaches in the laboratory, in the classroom and in his famous book, the *Textbook of Medical Physiology*. Medical students around the world know the name of Arthur Guyton as the sole author of their physiology textbook. It is the world's most widely used medical text, and has been translated into French, Spanish, Serbo-Croatian, Portuguese, Italian, Greek, Arabic, Japanese, Turkish and Indonesian.

The reason for its popularity is evident to students: They can understand it. Dr. Elvin Smith, a graduate student of Dr. Guyton's in the 60s and now professor of medical physiology at Texas A & M University, says that it's common practice for medical students to buy "Guyton" even when another textbook is assigned. "I frequently hear medical students say, 'I didn't understand that at all until I read Guyton.'"

Dr. Guyton himself is displeased with a lot of medical textbooks because he thinks that many are written by people who have more interest in making a name for themselves than in teaching. It's true now, he says, as much as it was when the first edition of his book was published in 1956.

Now in its seventh edition, with the eighth edition in progress, the book started out as lecture notes to students in Oxford where he was chairman of physiology before the medical school expanded and moved to Jackson. He found the textbook used by

the students unsatisfactory. So he started reading widely in all areas of physiology, pulling all the information together and giving copies to students. After using his own notes for a year or two, he realized that, with the addition of references and illustrations, he had the makings of a textbook. His longtime publisher, Saunders, had signed a contract with him before he ever left Oxford.

Work on the book has been a constant in his life. It was what he often took home to the not-so-quiet house filled with ten children. John, third oldest, said their father drew the line at letting them play in the living room where he worked. "But we were not quiet." They bowled and played kickball in the long hall that connected the six bedrooms while their father dictated or wrote in a wing-backed chair in the living room.

One of Dr. Guyton's longtime secretaries, Billie Howard, who transcribed all of his manuscripts from tape, confirms John's memories. "When I listened to the tape, there was always a background noise of children playing."

His book is a way of extending his dedication to students beyond the perimeter of his own classroom and laboratories. Dr. Guyton has personally taught every medical school graduate of the Medical Center since 1955, and perhaps one of his most compelling characteristics as a teacher is his accessibility — a common source of amazement to medical students, graduate students and faculty members who know the vast quantity of work he produces. He keeps no appointment book. If he's in his office, he's available to students — or anyone who needs to see him and for as long as it takes.

Dr. Guyton's office has two metal desks and two straight backed chairs, a computer, a wooden cabinet that belonged to his father, Venetian blinds the same age as the 34-year-old building; a wall of books; and a floor of gray linoleum tile, vintage 1955.

What it doesn't have are decorative touches. No curtains, no upholstered furniture, no fabric, no color save that on book covers, nothing on the walls, no framed diplomas, certificates, awards, photographs or mementos to remind anyone that the occupant is a frequently honored scientist.

His office is for work.

His house is for living. The functional 20-room house he designed of concrete and reinforced steel sits in the middle of 15 acres in north Jackson. There is plenty of fabric and color here. The walls are decorated, in contrast to those in his office, but mostly with photographs of family members and the collected drawings, poems and declarations of love

from children and grandchildren since 1945 or so.

Though they're all adults now, it's evident that this is still "home" to the eight boys and two girls who grew up here. Snapshots show the younger Guyton grandchildren on bright yellow plastic floats in the backyard swimming pool their fathers built.

"It is true that he has 'constructed' ideas, ways of thinking, a teaching program, theories and hypotheses. But his personal history is full of other things he's built and designed — objects that occupy space."

Because polio left him partially paralyzed, Dr. Guyton often acted as "site boss" on projects his children actually built — the pool, the tennis court, some stages of the house itself. "This turned out to be much better training for them than if I had actually done the work and let them help me. They developed a great deal of independence in the use of their hands and their intellect."

One of his children remembers that their father once had some stationery printed to be used at home with a letterhead which read simply, "A. C. Guyton: Builder."

It is true that he has "constructed" ideas, ways of thinking, a teaching program, theories and hypotheses. But his personal history is full of other things he's built and designed — objects which occupy space. Before he had polio, he built a sailboat which he later sold to his Oxford neighbor William Faulkner when he thought his paralysis would prevent him from enjoying it. He once built a television set from a kit long before they were in common use. When he was doing his work on interstitial fluid, he needed a device which could accurately measure the pressure of the fluid. None existed, so he invented one which is still in use in laboratories around the world.

While he was recuperating from polio at Warm Springs, Georgia, he turned his talent for invention and mechanical problem-solving to the needs of the handicapped. He invented the now widely used electronic "joystick" with which paraplegics can steer their electric wheelchairs and a special hoist for moving paralyzed patients from wheelchair to bed. For these inventions, he received a Presidential Citation.

That award, made in the early 50s was among the first of a long list of accolades which have come regularly in the decades since. The solemn and formal occasion at the University of Murcia was not

GUYTON/Continued

the first time a prestigious foreign assembly has honored this man. In 1978, Dr. Guyton gave the William Harvey Lecture at a special symposium in London, England, on the 400th birthday of William Harvey who first described the circulation of blood. Many historians mark Harvey's work as the beginning of modern physiology. The Royal College of Physicians invited Dr. Guyton as the keynote speaker as a tribute to the importance of his work in physiology in the 400 years since Harvey's pivotal discovery.

Dr. Nelson has said of him, "Any dean would be proud of Arthur Guyton and his accomplishments

— to have a department chairman who is in demand around the world. But a dean could be forgiven for thinking that such pre-eminence might come at a price — less contact with students, the delegation of teaching duties to others in the department, and generally, less attention paid to the home front. Yet nothing could be further from the truth. For 34 years, while his fame has grown steadily, he has shown us clearly that his priorities are here — with his family, first and foremost, with his students and the institution, and with the state."

"It is true that he belongs to the world," Dr. Nelson said, "but it's also true that by his own choice, he belongs most closely to us." ★★★

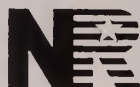
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Address of the President

DAVID R. STECKLER, M.D.

THANK YOU, Dr. Waites and members of this House of Delegates.

This marks the end of my term as president of our association. I take with me many fond memories and a better appreciation of what it means to be a member of our profession.

It's customary at this time for the holder of this office to give an overview of what he's heard, seen and thought.

First, I want to thank all of you who have served in county and state offices this year for your leadership on behalf of our profession. You made my term of office a lot easier.

I also want to acknowledge particularly the work of the president of our MSMA Auxiliary, Mrs. Ruth Smith. Ruth and I have been down many of the same highways during the year. A lot of them have been bumpy, but Ruth has served with endurance and grace.

My travels around the state and country have left me with many impressions about organized medicine and our profession. The impressions concern organization, responsibilities, and public image, and all are related.

From an organizational standpoint, I have become even more convinced that there must be one entity representing our profession in the political and socioeconomic arenas on the county, state and national levels. Name it what you want — that organization must be patterned after the county society, state society and the American Medical Association.

Our numbers are not great enough to divide into different camps seeking different goals and we must have a national organization that begins at the grassroots. The AMA is serving that role, but lacks the full support of all physicians. This is unfortunate

because if the AMA can succeed as it does now, just think what it could accomplish with all of us!

Next, I believe we must assume and demonstrate more responsibility for efficient utilization of the health care system in our country.

With Medicare Part B expenditures going up 15-20 percent a year, 37 million people without health insurance coverage in a country spending more per capita for health care than any country in the world, and 89 percent of the American people indicating they see a need for fundamental change in the direction and structure of our health system — it doesn't take a genius to realize that our profession has a challenge — and an opportunity to address growing concerns about the efficiency of our health care system.

Projects such as the AMA/Rand Corporation effort to develop parameters of care should be expanded to include cost of care alternatives. These projects should receive our full support and participation.

Dr. Robert J. Blendon of Harvard, speaking at the AMA Leadership Conference in February of this year, stated the majority of the American people surveyed favored the Canadian health system as compared to ours. He stated that the "public perspective is what drives change."

We need to take a leadership role in efforts to reduce the cost of medicine. We can change the public perspective by *doing* something about the rising costs of medicine instead of *studying it* as we (the AMA) have been doing in the past.

As you can see, I can support the AMA without always agreeing with its policies.

I would like to recommend that the AMA assume a leadership role in developing methods to lower the cost of medicine. This should then be disseminated to the membership through continuing education. I believe this would negate the necessity for the federal government to control the cost of health care and this is the track we are on now.

President of the MSMA, 1988-89.

Presented June 1, 1989 before the House of Delegates, 121st Annual Session in Biloxi.

Finally, there is the public image in our profession, where unfortunately, there is a growing perception that we are motivated more by pocketbook issues than patient concerns.

This perception can't be changed by implementing an expensive public relations program. It must be changed by our individual commitment to the care of patients regardless of their ability to pay. The "Senior Care" program we implemented this year can demonstrate this commitment. Participation in the Medicaid program can demonstrate this commitment.

Unfortunately many of us rely on our colleagues to participate in such programs as Medicaid and "Senior Care" while at the same time we worry about the image of our profession.

This past year our legislators considered a bill to mandate participation in the Medicare and Medicaid programs.

Let's demonstrate our commitment to patient care by participating in Medicaid and "Senior Care" and negate the necessity for such legislation.

Your delegate folder contains the business we have been about this past year. I want to particularly note some of the highlights of the various reports of your Board and Councils.

Probably no project in the history of our association is more important to its future than the strategic plan you have before you. I urge you to carefully consider the direction the plan takes various organizations sponsored and organized by our association through this House of Delegates.

This past year marked the largest expansion in the Mississippi Medicaid program since its enactment. Many of us have participated in and worked hard for this expansion but I want to particularly note the efforts of our president-elect, Dr. Ed Hill and immediate past-president, Dr. Lamar Weems.

Finally, we are looking at some potentially divisive issues on the disposal of waste and specifically, medical waste. I would encourage each of you to become knowledgeable about this subject and become leaders in your community for a solution.

I want to express special thanks to Charlie Mathews and the MSMA staff for making my job easier.

I want to end the year as I began last year — namely, to thank you for the honor of being elected president of this organization and to acknowledge my family for their support. I shall always be grateful to you both. ★★★

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Titles should be short, specific, and clear. Ordinarily, a title should not exceed 80 characters, including punctuation.

References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list. Textbooks, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the *Index Medicus*, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

Manuscripts accepted for publication are subject to copy editing. Authors will receive galley proof prior to publication. Galley proof is only for correction of errors, and text changes

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In addition, in view of *The Copyright Revision Act of 1976*, effective Jan. 1, 1978, transmittal letters to the editor should contain the following language: "In consideration of the Mississippi State Medical Association's taking action in reviewing and editing my submission, the author(s) undersigned hereby transfers, assigns, or otherwise conveys all copyright ownership to the MSMA in the event that such work is published by the MSMA." We regret that transmittal letters not containing the foregoing language signed by *all* authors of the submission will necessitate delay in review of the manuscript. — *The Editors.*



THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

Our Real Power — A Myth

DEBATE OVER whether basic medical care and benefits is a right or a privilege appears to be over. The overwhelming consensus is that basic health care is a right, and that right must be honored. Central to this, the great question now is how best to provide quality care that all American citizens can afford. Great concerns are raised about how to meet the health care needs of our growing elderly population, the indigent, and the uninsured.

A related question is the likelihood that every citizen can have access to a well-trained, competent primary care medical person who will provide preventive medical concepts, risk factor control, and lifestyle education — proven ways of cutting the cost of medical care. Some are asking why we are unable to train enough primary care medical persons to meet this enormous need. If this significant lack of primary care physicians is one of the most urgent issues in medicine in America today, then should we not be about correcting the problem, individually and collectively?

Another dilemma is the question of whether access and quality of care for the poor and uninsured is actually the responsibility of physicians at all, or whether it falls within the purview of the public and politicians. Some argue that solutions to those problems should be found within another social service context, and yet others in medical circles complain about politicians and social service persons who make legitimate, conscientious and sincere attempts to try to meet this responsibility.

From all sides, I hear the argument that eliminating waste in the medical system would truly impact on the excessive cost without adversely affecting quality of care. I hear this from politicians who allege fraudulent practices by physicians while overlooking the greatest source of waste in the system — bureaucratic manipulation and regulation.

Even organized medicine, with all its resources and energy, has not been able to find all the answers to these questions. We all have the feeling that the war is being lost, even though we are winning some individual battles here and there. Also, we are all somewhat disappointed that our own patients, who love us individually (but collectively may not hold such admiration for us), do not seem to comprehend the consequences of a health care system that will be fettered by cost-cutting mechanisms that will certainly impact on quality of care.

The real power in our ability to preserve the good parts of a medical delivery system and eliminate the bad parts probably rests with our patients. We physicians seem to operate under a myth — the belief that we are communicating with our patients. I dare say that less than one percent of us ever communicate with patients in a way that they truly understand our viewpoints concerning health care problems.

Perhaps it is time for organized medicine to try to correct this mythological perception that we have of ourselves and take these concerns directly to our patients in an organized,

(Continued on page 279)

EDITORIALS

JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

VOLUME XXX, NUMBER 8

AUGUST 1989

Tribute to Dr. Guyton Is Appropriate

Mississippi Senate Concurrent Resolution No. 564, "A Concurrent Resolution Commending Dr. Arthur Clifton Guyton for his outstanding contributions to humanity and congratulating him upon the occasion of his retirement, August 25, 1989," and Senate Concurrent Resolution No. 638, "A Concurrent Resolution extending an invitation to our fellow Americans and to the National Media to join the State of Mississippi in celebrating Arthur C. Guyton Day on August 25, 1989," have set the stage for appropriately honoring the outstanding career of Dr. Arthur C. Guyton. Mississippi physicians are encouraged to participate in the numerous events scheduled for this occasion.

The Publications Committee of your association unanimously voted to participate in these activities honoring Mississippi's most distinguished physician by including in the August 1989 issue, Volume 30, Number 8, JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION, a tribute to Dr. Arthur C. Guyton.

Dr. Guyton has been honored by so many national and international societies, organizations, and colleagues that it is extremely difficult to find words that do not paraphrase others recognizing his contributions. However, many Mississippi physicians are distinguished from the other groups by having had the privilege and pleasure of being a student in the classroom and laboratory of Dr. Guyton. Because of this, we do not have to rely on the reports and reviews of others to know what he has accomplished. As practicing physicians, we also know what his contributions to clinical medicine have meant to us and our patients.

Words cannot adequately express the profound respect Mississippi physicians have for Dr. Arthur Clifton Guyton. All attempts to adequately express our thoughts in writing would be lengthy and yet

still fall short of our expected goal. We do, however, gratefully express our appreciation and thanks for his profound contributions to humanity.

MYRON W. LOCKEY, M.D.
Editor

— Resolution — House of Delegates Mississippi State Medical Association

WHEREAS, the medical profession of Mississippi wishes to recognize and commend Dr. Arthur C. Guyton for his many contributions to our profession, state, and nation; and

WHEREAS, he has greatly distinguished himself as a scientist and teacher; and

WHEREAS, his many accomplishments include authorship of the *Textbook of Medical Physiology*, the most widely used physiology textbook in the world; and

WHEREAS, he played a leading role in the establishment of the University of Mississippi Medical Center in 1955; and


WHEREAS, he has personally taught over 4,000 members of our profession; and

WHEREAS, he is world renowned for his contributions in the field of cardiovascular physiology; Now, Therefore, Be It

RESOLVED, that the House of Delegates of the Mississippi State Medical Association in Annual Session on June 4, 1989 does acknowledge and commend Dr. Arthur C. Guyton for his many contributions to our profession, state and nation as a scientist and teacher.

ADOPTED: June 4, 1989

ATTESTED:


James C. Waites, M.D., Speaker
House of Delegates

COMMENT

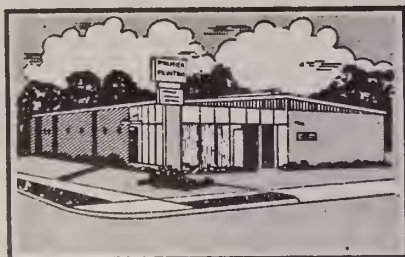
Turning off the T.V. to protect children from learning about sex, or opposing school health education just won't work. There are too many documented studies that demonstrate the positive effects of comprehensive school health education, including sex education, for Mississippians to bury their heads in the sand.

Available studies have found no association between the probability of initiating sexual activity and having had sex education (Zelnik and Kim, 1982; Kirby, 1984; Furstenberg, 1985; Marsiglio and Mott, 1986; Dawson, 1986).

Why should sex education be taught in public schools? A U.S. Department of Education report entitled "Youth Indicators 1988" shows students in the class of 1988 spend more time watching T.V. than reading, spending time with friends, or playing sports. Almost one fourth of the American population (adults and youth) spends every weekday in school. The U.S.D.E. also reports that the proportion of high school seniors who attend religious services weekly has declined steadily since 1980.

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Because schools have become the one place where we are certain to reach all children, it is imperative to include health education along with reading, writing, and arithmetic. Schools have always been our best vehicle for educating our youth about any subject that could prepare them for their future. Health education is a necessary subject for everyone's future.

School health education must be comprehensive in nature if we hope to impact the health status of Mississippians. Injuries are the leading cause of death in 1-44-year-olds. In 1987, 241 fifteen to twenty-four year olds died as the result of an auto accident (many were alcohol related). Mississippi ranks in the top five states for rates of both syphilis and gonorrhea. Mississippi youth continue to smoke (10-20%), and many have used alcohol (60% beer and 49% liquor), and other drugs. Last year, a Mississippi State Department of Health survey of 10th, 11th, and 12th graders showed that 4.4% had injected illicit drugs. Although we don't have comprehensive data, students across the state have little information about good nutrition, stress reduction, violence and abuse, first aid, and other health topics. They do not know where to turn for this information, and therefore make uninformed decisions that may affect the rest of their lives.

In most states where health education, including sex education is part of the curriculum, the majority of parents and teachers support the idea (Louis Harris, 1988; Forrest and Silverman, 1989). For us, health education is the best tool for prevention; not just of teen pregnancy, but for sexually transmitted diseases including AIDS, deaths and disability due to injuries, substance abuse, obesity and poor nutrition, dental disease, and the identification of mental illness. The health education we advocate focuses on abstinence, age-appropriate information and decision making skills. It must involve the entire community, and include parents in the planning and improvement processes.

Yes, school health education is a complex issue. It is an issue that is an educational, economic, and social one, as well as a public health issue. If Mississippi is to turn the corner in any of these areas, well planned health education must be one catalyst for change.

ELLEN SHEA JONES

DR. MARY CURRIER

JANE LEE

Mississippi State Department of Health
Jackson, MS

MEDICAL ORGANIZATION

State to Pay Tribute to Dr. A. C. Guyton

Hundreds of Mississippians will pay tribute to Dr. Arthur C. Guyton in a two-day celebration of his life and work. The world-renowned UMC professor and author is retiring in September from his post as chairman of physiology and biophysics.

Arthur Guyton Day will be celebrated August 25, with a symposium on hypertension. The first-come, first-served seminar for the public and medical professionals will be held at the 2,500-seat Jackson Municipal Auditorium. Speakers include Dr. Edgar Haber of Harvard School of Medicine, Dr. Norman Kaplan of the University of Texas Southwestern Medical Center, and Dr. John Laragh of Cornell University Medical Center.

Other events on the schedule include a reception and open house on August 24 and a banquet following the seminar on August 25. For information, contact the Arthur C. Guyton Day Committee, (601) 353-1200.

280 Receive Degrees At UMC Commencement

Some 280 students in the health sciences received degrees in University of Mississippi Medical Center graduation exercises on Sunday at city auditorium.

Senator Thad Cochran (R. Miss.) spoke to graduates on "The Bad News Is Wrong" in his keynote address for the 33rd annual Medical Center Commencement ceremony.

The graduate number included 100 for the MD, 64 for the BS in nursing, 30 for the DMD, 13 for the master's in nursing, one for the master of science, six for the PhD, 15 for the BS in health record administration, 23 for the BS in physical therapy, 12 for the BS in dental hygiene, six for the BS in respiratory care, eight for the BS in medical technology and two for the BS in cytotechnology.

The graduates and their families were honored at a breakfast hosted by Medical Center alumni and at the Chancellor's reception earlier on Commencement Day.

Dr. Bond Receives Award As Top Medical School Graduate



Dr. Kevin Henderson Bond of Columbus, center, graduated summa cum laude in the School of Medicine at the University of Mississippi Medical Center in Jackson and was recognized as the top medical school graduate at the University's 33rd commencement exercises May 28. He received the University's Waller S. Leathers Award, presented to the student with the highest academic average for four years in medical school. A member of Phi Kappa Phi and Alpha Omega Alpha, Dr. Bond was the recipient of numerous scholastic awards. He will do his residency in general surgery at Vanderbilt University Hospital in Nashville, Tenn. With him are Dr. Norman C. Nelson, UMC vice chancellor for health affairs, left; and Ole Miss Chancellor R. Gerald Turner.

Dr. Derrick Honored By Medical Assurance Company



Arthur A. Derrick, Jr., M.D., left, of Durant received a resolution from C. G. Sutherland, M.D., medical director for Medical Assurance Company of Mississippi (MACM), in appreciation for his service to the community and the medical profession, and in particular, for his assistance to MACM as a member of the Risk Management Committee.

MSMA's Tolbert Award Presented at UMC Commencement



Rebecca Lynn Henson of Weir, center, graduated summa cum laude from the School of Health Related Professions at the University of Mississippi Medical Center's 33rd annual commencement exercises on May 28. She received the Dr. Virginia Stancil Tolbert Award presented by the Mississippi State Medical Association to the outstanding health related professions student. She earned a B.S. degree in physical therapy. With her are, from left, Dr. Norman C. Nelson, UMC vice chancellor for health affairs; Dr. Thomas E. Freeland, dean of the School of Health Related Professions; and Dr. Carl Evers, medical school associate dean of academic affairs and an MSMA delegate to the American Medical Association; and Ole Miss Chancellor R. Gerald Turner.

Macon Honors Dr. Tom Mitchell



R. Faser Triplett, M.D., left, president of Medical Assurance Company of Mississippi (MACM), presented Tom H. Mitchell, M.D., of Vicksburg with a resolution in appreciation for his service to the community, to the medical profession, and specifically, to MACM as a member of the Claims Committee.

ALA Presents Achievement Medal to Dr. Campbell



Guy D. Campbell, M.D., of Jackson, right, received the Will Ross Medal from the American Lung Association. The award recognizes a lifetime of distinguished service to the ALA. With Dr. Campbell is Dr. G. Boyd Shaw, M.D., president of the Mississippi Lung Association, who made the presentation at the ALA Board of Directors meeting in Cincinnati, Ohio.

UMC Announces Faculty Appointments

Twenty-nine have been named in faculty appointments to the Schools of Medicine, Health Related Professions and Dentistry and centerwide at the University of Mississippi Medical Center for the current academic session.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs, announced the appointments following approval by the Board of Trustees of State Institutions of Higher Learning.

In the School of Medicine, Dr. Fredrick H. Shipkey was named professor of pathology.

Dr. Guillermo A. Herrera was appointed associate professor of pathology and Dr. Galen V. Poole, Jr., associate professor of surgery.

Appointed to the rank of assistant professor were Dr. Richard W. Finley, Dr. Andrew C. Lin and Dr. David H. Mulholland in medicine; Dr. David M. DeBauche in preventive medicine; Dr. Colette C. Parker and Dr. Emily S. Pender in pediatrics; Dr. Farid F. Muakkassa, in surgery and anesthesiology; Dr. Brett L. Arron, in anesthesiology; Dr. Scott H. McPherson in radiology; and Dr. Haynes L. Harkey III in neurosurgery.

Named instructors were Dr. Michael R. Byers and Dr. Grace G. Shumaker in medicine; Dr. Yutaro Shiota and Dr. Donna C. Sullivan in medicine (research); Dr. Elba A. Turbat-Herrera in pathology; Dr. Barbara M. Melvin, Dr. Melinda S. Ray and Dr. Suzanne B. Senter, in pediatrics; and Dr. Peter B. Wilton in surgery.

In the School of Health Related Professions, Lorraine M. Street and Joyce R. Titus were named instructors in occupational therapy.

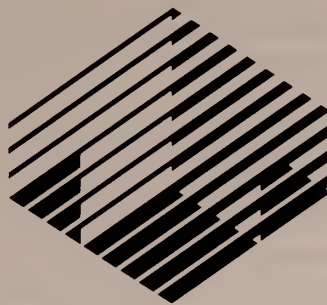
In the School of Dentistry, Dr. Dewey M. Metts, Jr. was named assistant professor of oral and maxillofacial surgery.

Dr. Michael W. Brands, Dr. William J. Gay and Dr. Salah P. Kivlighn were named instructors in physiology in biophysics in appointments centerwide.

Dr. Shipkey earned the B.Sc. in 1950 at the University of Nebraska and the M.D. in 1952 at George Washington University. He took his internship at the Mallory Institute of Pathology at Boston City Hospital, with residencies there and with the Memorial Sloan-Kettering Cancer Center at the Memorial Hospital for Cancer and Allied Diseases in New York, where he was chief resident and pathology research fellow and at the Institute Jules Bordet in Brussels, where he was an electron microscopy research fellow. He served in the 100th

Infantry Division of the U.S. Army from 1943-1946. He has held numerous medical staff appointments in the U.S. and Saudi Arabia and has been a member of the medical school faculty at Tufts University, Johns Hopkins University, Baylor University, University of Tennessee Health Science Center, University of Texas Health Sciences Center at Dallas and King Saud University in Riyadh, Saudi Arabia, where he had been professor of pathology since 1986.

Dr. Herrera took his premedical studies at the University of Miami and earned the M.D., cum laude, in 1975 at the University of Puerto Rico. He took his internship and residency at Brooke Army Medical Center, where he was chief resident of pathology. He has served in the U.S. Army and the Army Reserves Medical Corps, for which he was appointed a Lieutenant Colonel in 1988. He has held faculty appointments at the Universidad Autonoma and the University of Alabama at Birmingham; and has been a member of the medical staff of Brooke Army Medical Center, Walter Reed Army Medical Center, William Beaumont Army Medical Center, Veterans Administration Medical Center at Birmingham, and the Good Samaritan Hospital Palm Beach Pathology in Palm Beach, Florida, where he



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UMC FACULTY/Continued

was associate pathologist and director of electron microscopy and renal pathology since 1988.

Dr. Poole earned the A.B., magna cum laude, in 1973 at Hanover College and the M.D., with highest distinction, in 1978 at the University of Kentucky. He took his internship and residency at Wake Forest University Medical Center in Winston-Salem, North Carolina, and a fellowship at the Bowman Gray School of Medicine, where he was the Bradshaw Fellow in Surgical Research. He has been a member of the medical staff at the U.S. Air Force Hospital at Chanute AFB and the Carle Foundation Hospital at Urbana, Illinois, where he also was instructor in the general practice dental residency program. He has been on the clinical faculty at the University of Illinois College of Medicine at Urbana-Champaign.

Dr. Finley earned the B.S. in 1971 and the M.S. in 1974 at the University of Denver and the M.D. in 1976 at Tulane University. He took his internship and residency at Rush Presbyterian St. Luke's Medical Center in Chicago, Illinois, where he was appointed to the medical staff in 1979. He worked with the World Health Organization Immunology Research and Training Center, Hopital Cantonal at Geneva, Switzerland, before taking a fellowship at the University of Colorado Health Sciences Center in 1982. He also took a fellowship with the National Institutes of Health in Bethesda, Maryland, and has held medical staff appointments at hospitals in Illinois, Maryland and Denver.

Dr. Lin earned the B.S. in 1975 at Far Eastern University School of Medical Technology in the Philippines and the M.D., cum laude, in 1979 at the Far Eastern University Institute of Medicine. He took his internship at the Chinese General Hospital and Bicol Sanitarium and residencies at the University of the Philippines-Philippine General Hospital and at the University of Mississippi Medical Center, where he completed a fellowship in infectious diseases in 1988.

Dr. Mulholland earned the B.A. in 1975 at Ole Miss and the M.D. in 1980 at the University Medical Center, where he took his internship and residency and was a fellow in cardiology prior to his appointment to the faculty. He was on the medical staff of the Hinds County Health Department from 1983-1986.

Dr. DeBauche earned the B.S. cum laude, in 1979 at St. Norbert College in DePere, Wisconsin and the Ph.D. in 1985 at Marquette University at Milwaukee, where he took his predoctoral fellowship and was the Arthur J. Schmitt Fellow. He com-

pleted his postdoctoral fellowship at the Medical University of South Carolina at Charleston in 1989.

Dr. Parker earned the B.S. in 1980 at Mississippi College and the M.D. in 1984 at UMC, where she took her internship and residency, and has been a fellow in pediatric neurology since 1986.

Dr. Pender earned the B.S., summa cum laude, in 1977 at Delta State University and the M.D. in 1981 at UMC, where she took her internship and residency. She was in private practice in Rosedale from 1983-1985, and took a fellowship in pediatric emergency medicine at the Hospital for Sick Children in Toronto, Canada in 1987. She has been on the medical staff of the Children's Hospital and coordinator of emergency pediatrics at St. Anthony's Hospital in Denver since 1988.

Dr. Muakkassa earned the B.Sc. in 1979 and the M.D. in 1983 at the American University of Beirut, where he also took his internship. He took his residency at St. Francis Medical Center in Trenton, New Jersey, and was chief resident in surgery. He has been a critical care and trauma fellow at the University of North Carolina at Chapel Hill since 1988.

Dr. Arron, a 1977 graduate of the University of Vermont, earned the M.D. in 1981 at Tulane University. He took residencies at the Mayo Clinic Graduate School of Medicine and at Tulane University, where he also took a year of postdoctoral research, and has been chief resident in anesthesia since 1986. He also has held medical staff appointments at Tulane Medical Center, Touro Hospital, Pendleton-Methodist Hospital, Riverside Medical Center and Charity Hospital of New Orleans.

Dr. McPherson earned the B.S. in 1980 at Mississippi State University and the M.D. in 1984 at UMC. He took his internship at the University of Arkansas for Medical Sciences and residency at UMC, where he was chief resident in radiology.

Dr. Harkey, a 1974 graduate of Millsaps College earned the M.S. in 1977 at Northeast Louisiana University in Monroe and the M.D. in 1983 at Louisiana State University. He took his internship and residency at UMC.

Dr. Byers earned the B.S. at Millsaps College and the M.D. in 1985 at the University of Mississippi Medical Center, where he took his internship and completed his residency in June, 1989.

Dr. Shumaker earned the B.S. in 1982 at Mississippi State University and the M.D. in 1986 at the University of Mississippi Medical Center, where she took her internship and residency.

Dr. Shiota earned the B.D. in 1953 at Yamaguchi University School of Medicine at Ube, Japan. He

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took his internship at Shinnanyou Hospital at Shinnanyou, Yamaguchi and a residency at Kagawarousai Hospital at Marugame, Kagawa. He has held medical education and staff appointments at Okayama University School of Medicine and National Okayama Hospital in Okayama and had been at the Ehime Prefectural Central Hospital at Matsuyama, Ehime since 1985.

Dr. Sullivan earned the B.S. in 1975 at Millsaps College and the Ph.D. in 1986 at Louisiana State University. She has been a research associate and teaching assistant at the University of Mississippi Medical Center and a research assistant at the University of Tennessee Center for the Health Sciences. She took her postdoctoral fellowship at LSU Medical Center prior to her appointment to the UMC faculty.

Dr. Turbat-Herrera earned the B.A. in 1972 at the University of Miami and the M.D. in 1985 at the University of Alabama at Birmingham, where she took her internship and residency. She also took a year's residency at Mount Sinai Medical Center in Miami, Florida.

Dr. Melvin earned the B.S., cum laude, in 1980 at Millsaps College and the M.D. in 1985 at UMC, where she took her internship and residency and has been a fellow in ambulatory pediatrics since 1988.

Dr. Ray earned the B.A., cum laude, in 1981 at Ole Miss and the M.D. in 1986. She took her internship at UMC, where she is chief resident in pediatrics.

Dr. Senter earned the B.S. in 1982 at the University of New Orleans and the M.D. in 1986 at Louisiana State Medical Center. She completed her residency at the University of Mississippi Medical Center in June 1989.

Dr. Wilton earned the B.Sc. in 1976, the B.Sc.Hons. in 1977 and the M.B. B.Ch. in 1980 at the University of Witwatersrand at Johannesburg, South Africa, where he also took his internship and residency. He has been a resident in general surgery at the University of Minnesota since 1982.

Ms. Street earned the B.A. in 1980 at Ole Miss and the master's in occupational therapy in 1984 at Texas Women's University at Denton. She has been on the occupational therapy staff at Memorial Hospital Northwest at Houston, Texas, the Greater Mississippi Orthopedic Clinic and Magnolia Health Services Center at Oxford, Lakeshore Mobile Rehabilitation Center at Mobile, Alabama, Sun Coast Center for Rehabilitation at Gulfport, and Health South Rehabilitation Center at Jackson. She had been director of occupational therapy at the Mis-

issippi Children's Rehabilitation Center since July 1988.

Ms. Titus earned the B.S. in 1972 at the University of Washington at Seattle. She has been on the occupational therapy staff at the Veteran's Administration Medical Center at Vancouver, Washington, director of occupational therapy at Psychiatric Day Center of Marin at San Rafael, California, and chief of occupational therapy at the Veteran's Administration Medical Center at Martinez, California. She was associate professor of occupational therapy at San Jose State University from 1980-1985, and had been director of occupational therapy and coordinator of life skills and fine arts at the Mississippi State Hospital at Whitfield since 1986.

Dr. Metts earned the D.D.S. in 1950 at the University of Tennessee College of Dentistry and took post graduate training at New York University College of Dentistry. He took his residency in oral surgery at the Confederate Memorial Hospital at Shreveport, Louisiana, and has been chief of oral surgery at the USAF Hospital at Clark Air Force Base in the Philippines, Maxwell AFB Hospital at Montgomery, Alabama, and Keesler AFB Medical Center in Biloxi. He has been a training officer in oral surgery at Wilford Hall Hospital at Lackland AFB and has held military appointments as assistant professor of oral surgery and clinical surgery at the University of Texas at San Antonio, Texas. He also has been a member of the dental staff at a number of Mississippi Coast hospitals. He has been in private dental practice in Biloxi since his retirement at the rank of Colonel in 1972 from the U.S. Air Force after 26 years of active service.

Dr. Brand earned the B.S. in 1983 at Rockhurst College at Kansas City, Missouri and the Ph.D. in 1988 at the University of Missouri at Columbia. He had been a research associate in physiology and biophysics at UMC since 1988.

Dr. Gay earned the B.S. in 1979, with highest honors, at Auburn University and the M.D. in 1984 at the University of Alabama School of Medicine. He took a residency at Lloyd Noland Hospital at Fairfield, Alabama, where he became a member of the medical staff in 1986. He came to the Medical Center in 1987 as a graduate research associate and has been a postdoctoral fellow in physiology and biophysics since 1988.

Dr. Kivlighn earned the B.S. in 1979 at Iowa State University and the Ph.D. in 1989 at the University of Houston. He has been a research associate in physiology and biophysics at the Medical Center since 1988.

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AXID®

nizatidine capsules

Brief Summary

Consult the package literature for complete information.

Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients at a reduced dosage of 150 mg b.i.d. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindications: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H₂-receptor antagonists.

Precautions: General — 1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests — False-positive tests for urobilinogen with Multistix® may occur during therapy with nizatidine.

Drug Interactions — No interactions have been observed between Axid and theophylline, chlorazepate, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility — A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding of high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, prenatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy — Teratogenic Effects — Pregnancy Category C — Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers — Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use — Safety and effectiveness in children have not been established.

Use in Elderly Patients — Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled studies, the following were observed: headache (0.5% vs. <0.01%), somnolence (2.4% vs. 1.3%), and dizziness (0.2% vs. 0.01%). A variety of less common events was also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic — Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients and was possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 50 IU/L) and a single patient's SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular — In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS — Rare cases of reversible mental confusion have been reported.

Endocrine — Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic — Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H₂-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumentary — Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity — As with other H₂-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H₂-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (e.g., bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other — Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms — There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg, respectively.

Treatment — To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the Physicians' Desk Reference (PDR). In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for six to eight hours increased plasma clearance.

PV 2096 AMP

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Additional information available to the profession on request.

Medico-Legal Brief

Terming Procedure "Experimental" Not Violation of Antitrust

The American Academy of Ophthalmology did not violate the antitrust laws by calling radial keratotomy "experimental," a federal appellate court for Illinois ruled.

Radial keratotomy is a surgical procedure to correct nearsightedness. In 1979, the National Advisory Eye Council, principal advisor to the National Eye Institute (part of the National Institutes of Health) described refractive keratoplasty (a group of surgical procedures that includes radial keratotomy) as experimental. In 1980, it specifically labeled radial keratotomy as experimental and asked physicians to use restraint until further research could be done.

In June 1980, the Academy endorsed the Eye Council's position and issued a press release urging "patients, ophthalmologists and hospitals to approach [radial keratotomy] with caution until additional research was completed."

Eight ophthalmologists filed suit, claiming that the Academy violated Section 1 of the Sherman Antitrust Act because the press release was the result of a conspiracy among the Academy's members to restrain trade. A jury decided in favor of the Academy. On appeal, the eight ophthalmologists objected to the trial judge's jury instructions. However, on March 3, 1989, the Seventh Circuit Court of Appeals stated that assessment of the propriety of the jury instructions was moot; the case should never have gone to trial.

According to the appellate court, the trial court should have granted the Academy's motion for summary judgment based on the uncontested fact that the Academy did not prevent any ophthalmologists from performing radial keratotomies, nor did it sanction those who facilitated the use of the procedure. The Academy did not require its members to stop using the procedure or to stop associating

with those who perform this operation. It did not discipline or expel members who continued to do this surgery, and it did not induce hospitals to withhold permission to do the operation or insurance companies to refuse payment.

The court explained that in other trade association cases in which the association was found to have violated Section 1 of the Sherman Act, enforcement was involved. These enforcement mechanisms were the "restraint." According to the court, without enforcement, "there is only uncoordinated individual action, the essence of competition."

The court found that ophthalmologists are one another's competitors for patients, offering competing procedures to treat myopia; i.e., glasses, various types of contact lenses, and surgery. "Warfare" among physicians and their different products is competition rather than a restraint of trade. Unless one group of suppliers of a product or service diminishes another group's ability to promote and sell its product or service, there is no antitrust case because there is no restraint of trade.

The appellate court noted that other federal courts of appeals have held that when a trade association provides information but does not require others to follow its recommendations, it does not violate the antitrust laws. In fact, an association's first amendment right to express its opinion is not restricted by the antitrust laws merely because the organization has a great deal of influence with its members or with the general public, when the trade association simply appeals to consumers' good judgment. According to the court, even if such statements are false or misleading, the remedy is not antitrust litigation but more speech, "the marketplace of ideas."

In conclusion, the court stated that animosity, even if called "anticompetitive intent," is not illegal without anticompetitive effects. "The Sherman Act does not reach conduct that is only unfair, impolite, or unethical." — *Schachar v. American Academy of Ophthalmology, Inc.*, Docket No. 88-2398 (C.A.7, Ill., March 3, 1989)

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PERSONALS

ROBERT F. ALLEN of Meridian conducted a community service program on Parkinson's disease at Rush Foundation Hospital.

ROBERT BARNES of Natchez has been elected chairman of the board of directors for the Natchez National Historical Park Foundation.

RICHARD A. CONN of Hattiesburg spoke at First United Methodist Church in Laurel about developments in arthritis and joint replacement surgery.

ROBERT L. CURRY, IV, has associated with Gamble Brothers and Archer Clinic in Greenville for the practice of urology.

RALPH DIDLAKE of UMC was visiting professor at Temple University in Abington, Pennsylvania.

PIERCE D. DOTHEROW has joined the staff of Gastrointestinal Associates, P.A., 1421 North State Street, Suite 203, in Jackson, for the practice of gastroenterology, hepatology and therapeutic endoscopy.

R. H. FLOWERS, III, has associated with Jackson Medical Associates, 1600 North State Street, for the practice of infectious diseases and internal medicine.

DAVID J. FOREMAN has associated with DONALD L. ROBERTS of Biloxi for the practice of ear, nose and throat and facial plastic and reconstructive surgery.

HARRIETTE HAMPTON of UMC lectured at a meeting of the medical staff at Hardy Wilson Memorial Hospital in Hazlehurst.

JAMES HUGHES of UMC was on the faculty for an American Association of Orthopaedic Surgeons course in Phoenix, Arizona.

A. GENE HUTCHESON has associated with Brookhaven Internal Medicine Clinic, 1036 D. A. Biglane Drive, for the practice of internal medicine.

JAMES H. JOHNSTON of Jackson participated in the NIH Consensus Conference on Endoscopic Therapy of Peptic Ulcer Bleeding in Bethesda, Maryland.

DON LAGRONE of Biloxi was speaker at a parenting workshop sponsored by Handsboro United Methodist Church.

T. D. LAMPTON of UMC received the highest award given to a volunteer by the American Health Association, Mississippi Affiliate. The presentation of

the Heart of Gold Award took place during the 38th Annual Meeting in Jackson.

Pediatric Associates announces the relocation of DEBORAH T. LEE to Clinton Children's Clinic and extends congratulations to CHRIS E. SMITH on his appointment as assistant professor of pediatrics at Arkansas Children's Hospital.

KEITH MANSELL of UMC presented a paper at the American Thoracic Society annual meeting in Cincinnati, Ohio.

W. H. MERRELL of Jackson, special assistant to the surgeon general of the Army for National Guard Affairs, participated in MEDEX '89, the largest medical exercise ever conducted in the state.

FRANCIS MORRISON of UMC represented the American Society for Apheresis at a meeting of the National Blood Resource Education Program Coordinating Committee in Bethesda, Maryland.

JOHN MORRISON of UMC spoke at grand rounds at the University of Texas at Houston and Mt. Sinai Hospital in New York.

LUIS F. MOSQUERA of Yazoo City has been admitted to membership in the Society of American Gastrointestinal Endoscopic Surgeons.

EDWARD NORTH, JR., of Jackson was one of 52 people recognized by President George Bush in the 1989 President's Volunteer Action Awards.

THOMAS BRANTLEY PACE has associated with Jackson Bone and Joint Clinic for the practice of orthopaedic surgery.

W. H. PARKER of Quitman was honored by citizens of the area with a retirement reception.

GREGORY O. PATTON has associated with M. GLENN HUNT for the practice of obstetrics and gynecology at Oxford Obstetrics and Gynecology Associates, P.A., 2160 South Lamar Street.

JAMES PENNEBAKER of Hattiesburg spoke on "New Treatments for Arthritis" at a community education program sponsored by Forrest General Hospital.

Radiological Group, P.A. of Jackson has received the certification of the American College of Radiology Mammography Accreditation Program.

RANDY K. RICHARDSON has associated with Rayner Eye Clinic, 1308 Belk Drive in Oxford, for the practice of diseases and surgery of the eye.

RANDOLPH J. ROSS of Hattiesburg has been appointed clinical assistant professor of urology at Tu-

PERSONALS/Continued

lane Medical Center. He will remain in full-time private practice with Hattiesburg Clinic Urology Department and as medical director for the Center for Sexual Disorders.

DOUG ROUSE of Hattiesburg was a speaker on a program on "Steroid Use and Abuse" sponsored by the Institute for Wellness and Sports Medicine and Pfizer Laboratories.

D. P. SMITH of Jackson was delegation leader for a group of 22 physicians specializing in addiction medicine who spent 14 days in Russia meeting with physicians, officials and others involved in the treatment of alcohol and drug addiction in that country.

Surgical Clinic Associates, P.A. of Jackson announces the retirement of J. HARVEY JOHNSTON, JR., and the association for ALBERT MICHAEL KOURY for the practice of general, thoracic and vascular surgery.

Medical Director

The Mississippi Department of Corrections is seeking a qualified medical doctor to serve as Medical Director for the Medical/Dental Facility at the Mississippi State Penitentiary, Parchman, Mississippi. Qualifications for the position in addition to a medical license include specialty training in a primary care field. Salary range begins at \$85,000.00 PLUS with starting salary negotiable depending on experience and education. Attractive compensation and benefit package.

CONTACT:
W. E. Steiger
Hospital Administrator
Mississippi Department of Corrections
P.O. Box E
Parchman, Mississippi 38738

STEPHEN R. THOMAS has associated with Gulfport Orthopaedic Clinic for the practice of orthopaedic surgery.

DALE A. TOUCHSTONE has associated with Meridian Medical Associates.

C. R. VINCENT of Laurel spoke on osteoporosis at a community education program sponsored by South Central Regional Medical Center.

CHARLES WATRAS of Winona announces the closing of his office for the practice of family medicine to establish a new practice in North Carolina.

NEW MEMBERS

GRANGER, WESLEY D., Jackson. Born Adams County, MS, May 26, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and medicine residency, Howard University Hospital, Washington, D.C., 1985-88; elected by Central Medical Society.

THOMPSON, ALLEN HALE, Jackson. Born Greenville, MS, April 22, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned and medicine residency, University Medical Center, Jackson, 1985-88; elected by Central Medical Society.

DEATHS

POWER, HERBERT R., Vaiden. Born Weir, MS, Jan. 16, 1919; M.D., University of Tennessee College of Medicine, Memphis, 1950; interned one year John Gaston Hospital, Memphis; died June 4, 1989, age 70.

SIEGRIST, WILLIAM H., Jackson. Born Louisville, KY, March 19, 1920; M.D., University of Louisville School of Medicine, Louisville, KY, 1949; interned one year Elizabeth Buxton Hospital, Newport News, VA; orthopedic surgery residency, University Medical Center, Jackson, MS, 1957-61; died June 10, 1989, age 69.



James J. Bryan graduated from St. Stanislaus in 1941 and attended Notre Dame and Tulane Universities. Today, he is president of Bryan Chevrolet, and has served as vice-president of the St. Stanislaus Alumni Association.

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PRESIDENT'S PAGE

(Continued from page 262)

structured, and understandable manner.

It is my hope that in the near future many of you — some 400 to 500 of you who are members of the MSMA — will be asked to provide this information to a certain number of patients each day in your active practice. You will be provided very concise, understandable materials in order to communicate with your patients concerning their health care and the American health care system in particular.

When we call on you, please respond. Just consider this: if 100 of you presented this factual information in a very concise, non-time-consuming manner to 10 patients a day, 20 days a month, we are talking about 20,000 contacts with patients each month. You can see how that would snowball over time. I hope this "issue of the month" system will be adopted by our Council on Public Information and will become a permanent part of our attempts to communicate with our patient population in a positive way. It is my hope that this effort will produce a grassroots movement that will present Congress with non-self-serving reasons and documentation for changing the health care system only in the ways that would benefit the public. Let us hear from you concerning your views; but even more importantly, let your patients hear from you regularly.

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Physicians (especially specialists such as ophthalmologists, pediatricians, orthopedists, neurologists, etc.) interested in performing consultative evaluations (according to Social Security guidelines) should contact the Medical Relations Office. WATS 1-800-962-2230; Jackson, 922-6811; Martina Mayfield (ext. 2276) or Robbie Venable (ext. 2177).



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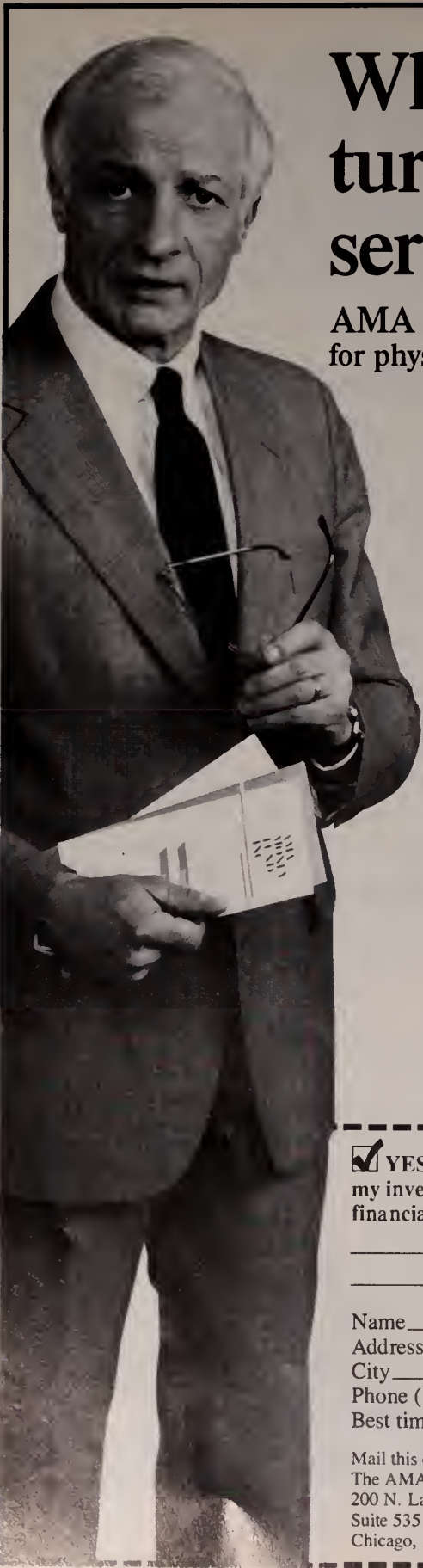
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PTMI05



VASOTEC[®]

(ENALAPRIL MALEATE) (MSD)

VASOTEC is available in 2.5-mg, 5-mg, 10-mg, and 20-mg tablet strengths.

Contraindications: VASOTEC[®] (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: **Angioedema:** Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, Drug Interactions and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: General: Impaired Renal Function: As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See Drug Interactions.)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: Patients on Diuretic Therapy: Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyl-dopa, nifedipine, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C: There was no teratogenicity or fetotoxicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women. However, data are available that show enalapril crosses the human placenta. Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC[®] (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome. Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely. Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypotension, or the underlying prematurity.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of ¹⁴C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION: The most frequent clinical adverse experiences in controlled trials were headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, Hypotension); cardiac arrest; pulmonary embolism and infarction, rhythm disturbances, atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Dher: Vasculitis, muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia; an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis (see PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 11% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g % and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: Hypertension: In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, Pharmacodynamics and Clinical Effects.) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium ≤ 130 mEq/L) or with serum creatinine > 1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, Heart Failure, WARNINGS, and PRECAUTIONS, Drug Interactions.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD Representative or see Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19486.

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JOURNAL

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SEPTEMBER

1989



**CIGARETTE
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THE JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION (ISSN 0026-6393) is owned and published monthly by the Mississippi State Medical Association, founded 1856, at 735 Riverside Drive, Jackson, Mississippi 39202. Subscription rate, \$25.00 per annum; \$35.00 per annum for foreign subscriptions; \$2.25 per copy, as available. Advertising rates furnished on request. Printed by The Ovid Bell Press, Inc., Fulton, Missouri. Second-class postage paid at Jackson, Mississippi, and at additional mailing offices. POSTMASTER: Send address changes to Mississippi State Medical Association, P.O. Box 5229, Jackson, Mississippi 39216.

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NEWSLETTER

September 1989

Dear Doctor:

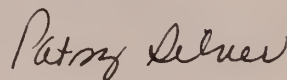
"Confronting the Issues Together" is the theme of a national hospital medical staff conference sponsored by the AMA. Set for Oct. 19-21 in Washington, the conference will feature these topics: PROs, implementing programs for indigent care, controlling health care costs, practice parameters, nursing/allied health care shortages, RBRVS, ethical issues of patient referral and of the terminally ill, tort reform, antitrust laws, dispute resolution, and implementing the National Practitioner Data Bank. The conference is expected to draw medical staff officers, medical directors, medical staff services professionals, CEOs, and hospital board members.

One issue that appears to be surfacing nationally is that of "patient dumping." In a Texas incident, an obstetrician is appealing a fine for failing to provide ER care for a maternity patient despite the fact that the hospital was apparently not equipped to respond to the patient's medical need. Also, a Mississippi hospital has come under investigation by a federal agency as a result of charges of "patient dumping." A Marshall County hospital is charged with failure to follow federal guidelines when it transferred an ER patient to a hospital in Southaven.

A new method of monitoring the results of medical care is described in the August 18 issue of JAMA. The Medical Outcome Study was conducted to increase understanding of how specific components of the health care system affect medical care outcomes. The authors note, "Pressures to control rising health care costs have escalated, yet the impact of cost-containment strategies on the outcomes of care remain unknown." An accompanying editorial suggests that it may be time to turn attention to the "technology of patient experience," and concludes that such studies may help physicians "treat the patient, not the disease."

The issue of abortion is expected to be on the agenda for the 1990 Session of the Mississippi Legislature, as a result of the U.S. Supreme Court's recent decision. Proponents of both sides expect a serious battle.

Sincerely,



Patsy Silver
Managing Editor

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The pH of DEMEROL solutions is adjusted between 3.5 and 6 with sodium hydroxide or hydrochloric acid.

DEMOROL hydrochloride, brand of meperidine hydrochloride, 5 percent solution has a specific gravity of 1.0086 at 20°C and 10 percent solution, a specific gravity of 1.0165 at 20°C.

Inactive Ingredients—TABLETS: Calcium Sulfate, Dibasic Calcium Phosphate, Starch, Stearic Acid, Talc. SYRUP: Benzoic Acid, Flavor, Liquid Glucose, Purified Water, Saccharin Sodium.

CLINICAL PHARMACOLOGY

Meperidine hydrochloride is a narcotic analgesic with multiple actions qualitatively similar to those of morphine; the most prominent of these involve the central nervous system and organs composed of smooth muscle. The principal actions of therapeutic value are analgesia and sedation.

There is some evidence which suggests that meperidine may produce less smooth muscle spasm, constipation, and depression of the cough reflex than equianalgesic doses of morphine. Meperidine, in 60 mg to 80 mg parenteral doses, is approximately equivalent in analgesic effect to 10 mg of morphine. The onset of action is slightly more rapid than with morphine, and the duration of action is slightly shorter. Meperidine is significantly less effective by the oral than by the parenteral route, but the exact ratio of oral to parenteral effectiveness is unknown.

INDICATIONS AND USAGE

For the relief of moderate to severe pain (parenteral and oral forms)
For preoperative medication (parenteral form only)
For support of anesthesia (parenteral form only)
For obstetrical analgesia (parenteral form only)

CONTRAINDICATIONS

Hypersensitivity to meperidine.

Meperidine is contraindicated in patients who are receiving monoamine oxidase (MAO) inhibitors or those who have recently received such agents. Therapeutic doses of meperidine have occasionally precipitated unpredictable, severe, and occasionally fatal reactions in patients who have received such agents within 14 days. The mechanism of these reactions is unclear, but may be related to a preexisting hyperphenylalaninemia. Some have been characterized by coma, severe respiratory depression, cyanosis, and hypotension, and have resembled the syndrome of acute narcotic overdose. In other reactions the predominant manifestations have been hyperexcitability, convulsions, tachycardia, hyperpyrexia, and hypertension. Although it is not known that other narcotics are free of the risk of such reactions, virtually all of the reported reactions have occurred with meperidine. If a narcotic is needed in such patients, a sensitivity test should be performed in which repeated, small, incremental doses of morphine are administered over the course of several hours while the patient's condition and vital signs are under careful observation. (Intravenous hydrocortisone or prednisolone have been used to treat severe reactions, with the addition of intravenous chlorpromazine in those cases exhibiting hypertension and hyperpyrexia. The usefulness and safety of narcotic antagonists in the treatment of these reactions is unknown.)

Solutions of DEMEROL and barbiturates are chemically incompatible.

WARNINGS

Drug Dependence Meperidine can produce drug dependence of the morphine type and therefore has the potential for being abused. Psychic dependence, physical dependence, and tolerance may develop upon repeated administration of meperidine, and it should be prescribed and administered with the same degree of caution appropriate to the use of morphine. Like other narcotics, meperidine is subject to the provisions of the Federal narcotic laws.

Interaction with Other Central Nervous System Depressants MEPERIDINE SHOULD BE USED WITH GREAT CAUTION AND IN REDUCED DOSAGE IN PATIENTS WHO ARE CONCURRENTLY RECEIVING OTHER NARCOTIC ANALGESICS, GENERAL ANESTHETICS, PHENOTHIAZINES, OTHER TRANQUILIZERS (SEE DOSAGE AND ADMINISTRATION), SEDATIVE-HYPNOTICS (INCLUDING BARBITURATES), TRICYCLIC ANTIDEPRESSANTS AND OTHER

CNS DEPRESSANTS (INCLUDING ALCOHOL), RESPIRATORY DEPRESSION, HYPOTENSION, AND PROFOUND SEDATION OR CDMA MAY RESULT.

Head Injury and Increased Intracranial Pressure. The respiratory depressant effects of meperidine and its capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions, or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries. In such patients, meperidine must be used with extreme caution and only if its use is deemed essential.

Intravenous Use. If necessary, meperidine may be given intravenously, but the injection should be given very slowly, preferably in the form of a diluted solution. Rapid intravenous injection of narcotic analgesics, including meperidine, increases the incidence of adverse reactions; severe respiratory depression, apnea, hypotension, peripheral circulatory collapse, and cardiac arrest have occurred. Meperidine should not be administered intravenously unless a narcotic antagonist and the facilities for assisted or controlled respiration are immediately available. When meperidine is given parenterally, especially intravenously, the patient should be lying down.

Asthma and Other Respiratory Conditions. Meperidine should be used with extreme caution in patients having an acute asthmatic attack, patients with chronic obstructive pulmonary disease or cor pulmonale, patients having a substantially decreased respiratory reserve, and patients with preexisting respiratory depression, hypoxia, or hypercapnia. In such patients, even usual therapeutic doses of narcotics may decrease respiratory drive while simultaneously increasing airway resistance to the point of apnea.

Hypotensive Effect. The administration of meperidine may result in severe hypotension in the postoperative patient or any individual whose ability to maintain blood pressure has been compromised by a depleted blood volume or the administration of drugs such as the phenothiazines or certain anesthetics.

Usage in Ambulatory Patients. Meperidine may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery. The patient should be cautioned accordingly.

Meperidine, like other narcotics, may produce orthostatic hypotension in ambulatory patients.

Usage in Pregnancy and Lactation. Meperidine should not be used in pregnant women prior to the labor period, unless in the judgment of the physician the potential benefits outweigh the possible hazards, because safe use in pregnancy prior to labor has not been established relative to possible adverse effects on fetal development.

When used as an obstetrical analgesic, meperidine crosses the placental barrier and can produce depression of respiration and psychophysiological functions in the newborn. Resuscitation may be required (see section on **OVERDOSAGE**).

Meperidine appears in the milk of nursing mothers receiving the drug.

PRECAUTIONS

As with all intramuscular preparations DEMEROL intramuscular injection should be injected well within the body of a large muscle.

Supraventricular Tachycardias. Meperidine should be used with caution in patients with atrial flutter and other supraventricular tachycardias because of a possible vagolytic action which may produce a significant increase in the ventricular response rate.

Convulsions. Meperidine may aggravate preexisting convulsions in patients with convulsive disorders. If dosage is escalated substantially above recommended levels because of tolerance development, convulsions may occur in individuals without a history of convulsive disorders.

Acute Abdominal Conditions. The administration of meperidine or other narcotics may obscure the diagnosis or clinical course in patients with acute abdominal conditions.

Special Risk Patients. Meperidine should be given with caution and the initial dose should be reduced in certain patients such as the elderly or debilitated, and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, and prostatic hypertrophy or urethral stricture.

ADVERSE REACTIONS

The major hazards of meperidine, as with other narcotic analgesics, are respiratory depression and, to a lesser degree, circulatory depression; respiratory arrest, shock, and cardiac arrest have occurred.

The most frequently observed adverse reactions include lightheadedness, dizziness, sedation, nausea, vomiting, and sweating. These effects seem to be more prominent in ambulatory patients and in those who are not experiencing severe pain. In such individuals, lower doses are advisable. Some adverse reactions in ambulatory patients may be alleviated if the patient lies down.

Other adverse reactions include:

Nervous System. Euphoria, dysphoria, weakness, headache, agitation, tremor, uncoordinated muscle movements, severe convulsions, transient hallucinations and disorientation, visual disturbances. Inadvertent injection about a nerve trunk may result in sensory-motor paralysis which is usually, though not always, transitory.

Gastrointestinal. Dry mouth, constipation, biliary tract spasm.

Cardiovascular. Flushing of the face, tachycardia, bradycardia, palpitation, hypotension (see Warnings), syncope, phlebitis following intravenous injection.

Genitourinary. Urinary retention.

Allergic. Pruritus, urticaria, other skin rashes, wheal and flare over the vein with intravenous injection.

Other. Pain at injection site; local tissue irritation and induration following subcutaneous injection, particularly when repeated, anti-diuretic effect.

DOSAGE AND ADMINISTRATION

For Relief of Pain

Dosage should be adjusted according to the severity of the pain and the response of the patient. While subcutaneous administration is suitable for occasional use, intramuscular administration is preferred when repeated doses are required. If intravenous administration is required, dosage should be decreased and the injection made

very slowly, preferably utilizing a diluted solution. Meperidine is less effective orally than on parenteral administration. The dose of DEMEROL should be proportionately reduced (usually by 25 to 50 percent) when administered concomitantly with phenothiazines and many other tranquilizers since they potentiate the action of DEMEROL.

Adults. The usual dosage is 50 mg to 150 mg intramuscularly, subcutaneously, or orally, every 3 or 4 hours as necessary.

Children. The usual dosage is 0.5 mg/lb to 0.8 mg/lb intramuscularly or subcutaneously, or orally up to the adult dose, every 3 or 4 hours as necessary.

Each dose of the syrup should be taken in one-half glass of water since if taken undiluted, it may exert a slight topical anesthetic effect on mucous membranes.

For Preoperative Medication

Adults. The usual dosage is 50 mg to 100 mg intramuscularly or subcutaneously, 30 to 90 minutes before the beginning of anesthesia.

Children. The usual dosage is 0.5 mg/lb to 1 mg/lb intramuscularly or subcutaneously up to the adult dose, 30 to 90 minutes before the beginning of anesthesia.

For Support of Anesthesia

Repeated slow intravenous injections of fractional doses (eg, 10 mg/mL) or continuous intravenous infusion of a more dilute solution (eg, 1 mg/mL) should be used. The dose should be titrated to the needs of the patient and will depend on the premedication and type of anesthesia being employed, the characteristics of the particular patient, and the nature and duration of the operative procedure.

For Obstetrical Analgesia

The usual dosage is 50 mg to 100 mg intramuscularly or subcutaneously when pain becomes regular, and may be repeated at 1- to 3-hour intervals.

OVERDOSAGE

Symptoms. Serious overdosage with meperidine is characterized by respiratory depression (a decrease in respiratory rate and/or tidal volume, Cheyne-Stokes respiration, cyanosis), extreme somnolence progressing to stupor or coma, skeletal muscle flaccidity, cold and clammy skin, and sometimes bradycardia and hypotension. In severe overdosage, particularly by the intravenous route, apnea, circulatory collapse, cardiac arrest, and death may occur.

Treatment. Primary attention should be given to the reestablishment of adequate respiratory exchange through provision of a patent airway and institution of assisted or controlled ventilation. The narcotic antagonist, naloxone hydrochloride, is a specific antidote against respiratory depression which may result from overdosage or unusual sensitivity to narcotics, including meperidine. Therefore, an appropriate dose of this antagonist should be administered, preferably by the intravenous route, simultaneously with efforts at respiratory resuscitation. An antagonist should not be administered in the absence of clinical significant respiratory or cardiovascular depression.

Oxygen, intravenous fluids, vasopressors, and other supportive measures should be employed as indicated.

In cases of overdosage with DEMEROL tablets, the stomach should be evacuated by emesis or gastric lavage.

NOTE: In an individual physically dependent on narcotics, the administration of the usual dose of a narcotic antagonist will precipitate an acute withdrawal syndrome. The severity of this syndrome will depend on the degree of physical dependence and the dose of antagonist administered. The use of narcotic antagonists in such individuals should be avoided if possible. If a narcotic antagonist must be used to treat serious respiratory depression in the physically dependent patient, the antagonist should be administered with extreme care and only one-fifth to one-tenth the usual initial dose administered.

HOW SUPPLIED

For Parenteral Use

Detecto-Seal® — Carpuject® Sterile Cartridge-Needle Unit — 2.5 percent (25 mg per 1 mL) **NDC 0024-0324-02**, 5 percent (50 mg per 1 mL) **NDC 0024-0325-02**, 7.5 percent (75 mg per 1 mL) **NDC 0024-0326-02**; and 10 percent (100 mg per 1 mL) **NDC 0024-0328-02** all in boxes of 10.

Each cartridge is only partially filled based upon product volume to permit mixture with other sterile materials in accordance with the best judgment of the physician.

Uni-Amp® — 5 percent solution; ampuls of 0.5 mL (25 mg) **NDC 0024-0361-04**, 1 mL (50 mg) **NDC 0024-0362-04**, 1½ mL (75 mg) **NDC 0024-0363-04**, and 2 mL (100 mg) **NDC 0024-0364-04** all in boxes of 25; and 10 percent solution, ampuls of 1 mL (100 mg) **NDC 0024-0365-04** in boxes of 25.

Uni-Nest™ — 5 percent solution; ampuls of 0.5 mL (25 mg) **NDC 0024-0371-04**, 1 mL (50 mg) **NDC 0024-0372-04**, 1½ mL (75 mg) **NDC 0024-0373-04**, and 2 mL (100 mg) **NDC 0024-0374-04** all in boxes of 25; and 10 percent solution, ampuls of 1 mL (100 mg) **NDC 0024-0375-04** in boxes of 25.

Vials — 5 percent multiple-dose vials of 30 mL NDC 0024-0329-01 and 10 percent multiple-dose vials of 20 mL NDC 0024-0331-01 all in boxes of 1.

Note: The pH of DEMEROL solutions is adjusted between 3.5 and 6 with sodium hydroxide or hydrochloric acid. Multiple-dose vials contain metacresol 0.1 percent as preservative. No preservatives are added to the ampuls or CARPUJECT Sterile Cartridge-Needle Unit.

For Oral Use

Tablets of 50 mg, bottles of 100 (**NDC 0024-0335-04**) and 500 (**NDC 0024-0335-06**); Hospital Blister Pak of 25 (**NDC 0024-0335-02**), 100 mg, bottles of 100 (**NDC 0024-0337-04**) and 500 (**NDC 0024-0337-06**); Hospital Blister Pak of 25 (**NDC 0024-0337-02**).

Syrup, nonalcoholic, banana-flavored 50 mg per 5 mL teaspoon, bottles of 16 fl oz (**NDC 0024-0332-06**).

Revised May 1988

DW-55H

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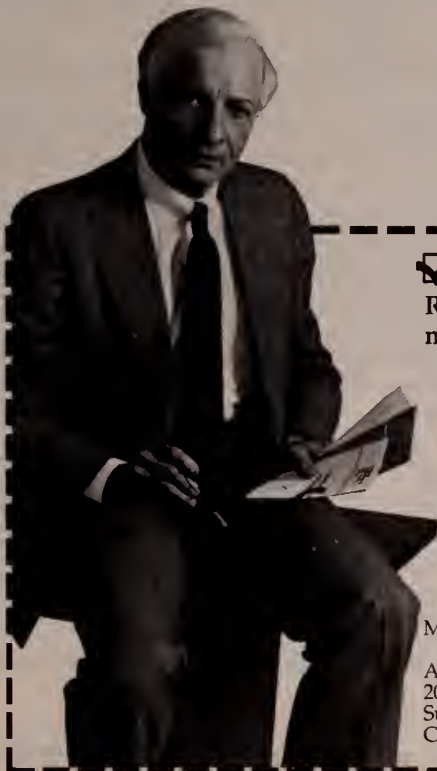
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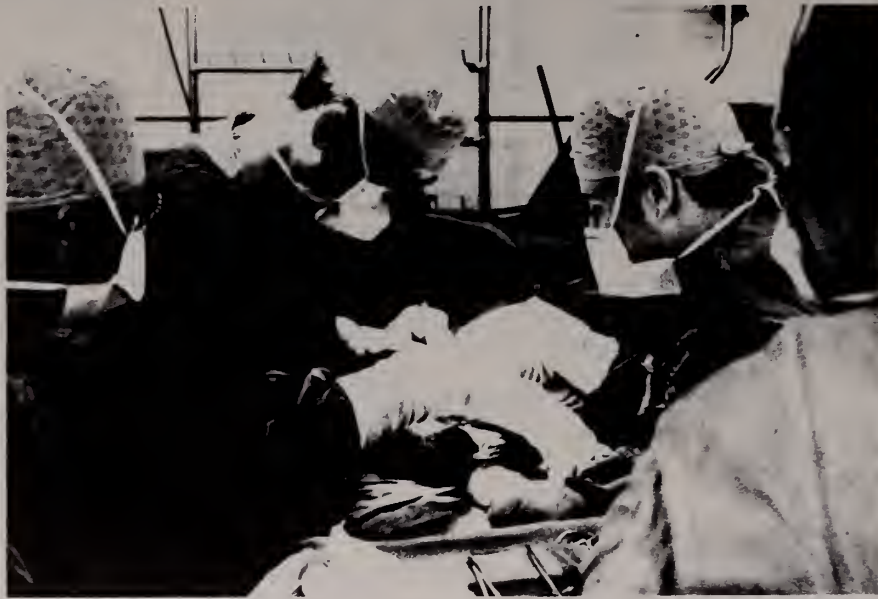
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DATELINE

Environmental Health Committee Appointed

Jackson, MS - In response to concerns expressed by MSMA members at the June House of Delegates meeting, a Committee on Environmental Health has been appointed. Chaired by Dr. David Steckler, MSMA's immediate past president, the Committee will serve as the association's official study and advisory group on environmental issues, beginning with current state efforts to define and regulate disposal of medical waste.

Activities to Prevent Enactment of ETs

Chicago, IL - The AMA has been actively involved in a broad range of activities to prevent enactment of Expenditure Targets. In addition to keeping some 300,000 physicians informed on the issue, AMA officers and trustees have visited 26 of the 50 largest newspaper editorial boards, and the association has published ads condemning the ET proposal. The ET proposals will reach House and Senate floors this fall.

Geriatric Medicine Conference is Set

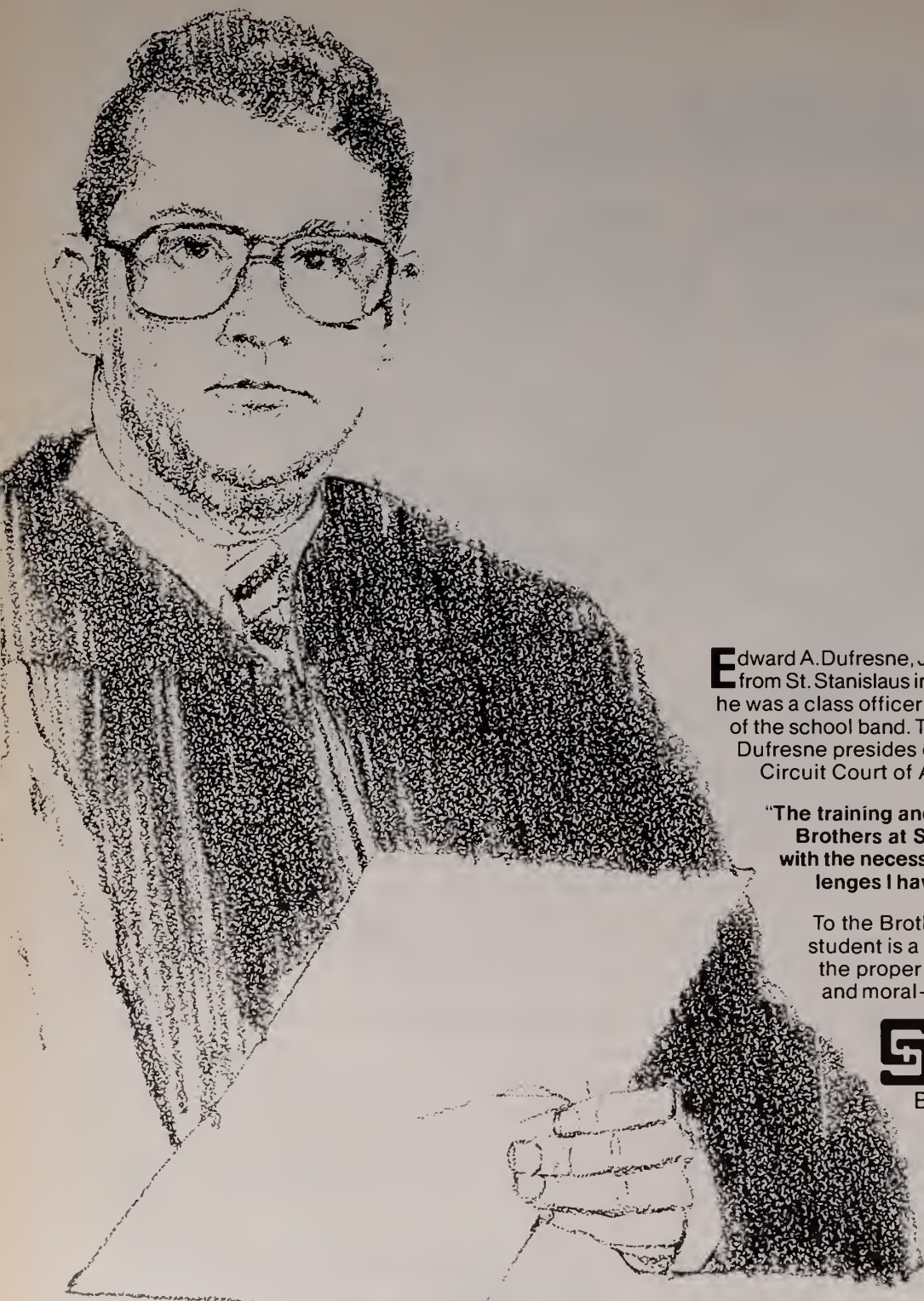
Chicago, IL - "Clinical Update in Geriatric Medicine" is a conference to be sponsored by the AMA and the American Geriatric Society, October 27-28 in Chicago. More than one in every 10 Americans are aged 65 or older, and within the next 30 years their number will double to 64 million. The growing ranks of elderly Americans will present new challenges to medical professionals. For conference information, call (312) 645-5360.

FDA, AMA Sponsor Conference on Drugs

Chicago, IL - "Drug Regulation and Availability: Balancing the Needs of the Individual with Those of Society" is the theme of a conference co-sponsored by the AMA and the U.S. Food and Drug Administration, Oct. 26-27 in Virginia. The conference will explore implications of recent changes in procedures for developing, evaluating and marketing of drugs intended to treat the seriously ill.

Congressional Action On Health Matters

Washington, DC - The U.S. House approved a permanent ban on smoking aboard flights of two hours or less...The Senate Labor Committee approved legislation requiring businesses to provide health insurance for all employees who work more than 17.5 hours per week. The bill would extend insurance coverage to more than 24 million Americans who do not have insurance and would phase in expansion of Medicaid to cover other uninsured.



Edward A. Dufresne, Jr. graduated from St. Stanislaus in 1956 where he was a class officer and captain of the school band. Today, Judge Dufresne presides over the 5th Circuit Court of Appeal, State of Louisiana.

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ORIGINAL PAPERS

Cigarette Smoking: More than a Habit

H. THOMAS MILHORN, JR., M.D., PHD.

Jackson, Mississippi

NICOTINE is a psychoactive agent whose continued use usually leads to dependence.¹ The most common form of nicotine dependence is associated with the inhalation of cigarette smoke. Pipe and cigar smoking, the use of snuff and the chewing of tobacco are less likely to lead to nicotine dependence.² We will, therefore, address cigarette smoking as the primary agent of nicotine addiction.

Despite the fact that cigarette smoking is the largest single preventable cause of death and disability in the United States, most patients report that they have not been counseled by their physician to quit. This failure is, in part, due to the fact that physicians feel a need for skills training in the area of smoking cessation.³ In addition, many physicians still view cigarette smoking erroneously as a habit rather than a true drug addiction.

Pharmacology of Nicotine

Cigarette smoke is composed of hundreds of substances. These can be divided into cigarette constituents (organic matter, nicotine alkaloids, additives) and pyrolysis products (CO₂, CO, Tar).⁴ Carcinogens are found primarily in the particulate phase of smoke.⁵ The smoke itself consists of mainstream smoke which is inhaled by the smoker directly from the cigarette and sidestream smoke which enters the atmosphere from the lit end of the cigarette and is inhaled by others in the vicinity, including nonsmokers.⁴ Eighty percent of environmental tobacco smoke is sidestream smoke. It

The author states that the pharmacologic and behavioral processes that determine nicotine addiction are similar to those that determine addiction to heroin and cocaine. He maintains that treatment of nicotine addiction should be more widely available, and suggests that many physicians still view cigarette smoking erroneously as a habit rather than a true drug addiction.

contains greater concentrations of various toxic and carcinogenic compounds than mainstream smoke.⁵

The average cigarette contains about 10 mg of nicotine. A variable amount, probably between one to two milligrams, is actually delivered to the lungs when the cigarette is smoked.⁶ Absorption of nicotine in the lungs depends on inhalation amount, inhalation depth, inhalation duration and pH of the smoke.⁴ A puff of smoke results in a measurable nicotine level in the brain in seconds.⁷ With regular use, nicotine accumulates in the body during the day and persists overnight. Thus, smokers are exposed to the effects of nicotine 24 hours a day. Nicotine readily crosses the blood brain barrier where it acts as an agonist on specific cholinergic receptors in the central nervous system.⁸ It is metabolized in the liver. Continine is its major metabolite.⁶

Trends in Smoking

Despite escalating worldwide cigarette consumption, smoking rates in the United States continue to decline. Consumption reached a peak in the mid

From the Department of Family Medicine, University Medical Center, Jackson, Mississippi.

1960's when 42 percent of adults smoked (52 percent of males and 34 percent of females). Per capita consumption began to drop after 1964 when the Surgeon General reported tobacco use to be a major health hazard. Currently, 26.5 percent of adults smoke (29.5 percent of men and 23.8 percent of women).^{3, 7, 9} Despite the trend towards fewer and fewer smokers, there has been a considerable increase in the percentage of heavy smokers.³

Medical Complications of Smoking

The medical complications of smoking may be divided into those resulting from mainstream smoke (active smoking) and those resulting from sidestream smoke (passive smoking).

Active Smoking

It is estimated that as many as 350,000 deaths per year in the United States may be attributed to active smoking. This would represent 18 percent of all deaths.³ Total smoking-related health costs and lost productivity costs amount to approximately 65 billion dollars each year.⁸

TABLE 1

DISEASES/CONDITIONS ASSOCIATED WITH SMOKING

Active Smoking

- Cancer — oral cavity, pharynx, larynx, esophagus, lung, pancreas, kidney, bladder
- Cardiovascular — aggravation of exercise-induced angina, coronary artery disease, myocardial infarction, cardiac arrhythmias, sudden cardiac death, stroke, aortic aneurysm, arteriosclerotic peripheral vascular disease, thromboangiitis obliterans (Buerger's Disease)
- Pulmonary — impaired pulmonary function, emphysema, acute and chronic bronchitis, chronic cough and hoarseness due to vocal cord irritation
- Perinatal Effects of Maternal smoking — increased mortality, reduced birth weight, spontaneous abortion, sudden infant death syndrome, congenital abnormalities, hyperactivity in childhood, risk of cancer in later life
- Miscellaneous — peptic ulcer disease, erythrocytosis, peripheral blood leukocytosis, smoker's skin, decreased taste and smell, abnormal sperm counts and evidence of chromosomal damage, decreased fertility, increased accident rate, altered drug metabolism, adverse health consequences in women on oral contraceptives

Passive Smoking

- Cancer — lung
- Cardiovascular — aggravation of exercise-induced angina, premature ventricular contractions
- Pulmonary — impaired pulmonary function in adults, asthma attacks, pulmonary infections, bronchiolitis, decreased growth rate of lungs, impaired pulmonary function in children
- Perinatal Effects — decreased birth weight (maternal or paternal smoking)
- Miscellaneous — increased hospital admissions of infants, middle ear effusions and sinusitis in children, decreased growth rate

Passive Smoking

Urinary cotinine and carboxyhemoglobin levels in nonsmokers have been shown to increase directly with the number of cigarettes smoked in the local environment.^{3, 5} Passive exposure leads to significant morbidity and mortality. It has been estimated that as many as 5,000 deaths per year may be related to passive smoking.³

The health consequences of active and passive smoking are summarized in Table 1.

Nicotine Addiction

The latest report of the Surgeon General stated that (1) cigarettes and other forms of tobacco are addicting, (2) nicotine is the drug in tobacco that causes the addiction and (3) the pharmacological and behavioral processes that determine tobacco addiction are similar to those that determine addiction to drugs such as heroin and cocaine.¹ In research protocols where nicotine has been given intravenously it has been found to be more addicting than cocaine.³

The central element among all forms of drug addiction is that the user's behavior is largely controlled by a psychoactive substance. Compulsive use of the drug often occurs despite damage to the individual or society. Drug seeking and drug taking behavior is driven by strong, often irresistible, urges. It often takes precedence over other important priorities. It can persist despite a desire to quit or even repeated attempts to quit.¹ This is certainly true of cigarette smoking. Most smokers who experience a myocardial infarction, for example, resume smoking after leaving the hospital.⁷

Addicting drugs are reinforcing; that is, the pharmacological action of the drug is sufficiently rewarding to maintain self administration.¹ This is true of nicotine. In fact, smoking patterns of non-human primates resemble that of stimulant drug self-administration.¹⁰

Addictive behavior often involves regular and temporal patterns of use. Environmental factors, including drug associated stimuli and social pressures, are important influences of initiation and patterns of use.¹ Deprivation increases desire for the drug. This is commonly observed during the theater intermission when cigarettes have been unavailable for a period of time.¹

Paired stimuli are known to increase drug use. In the case of nicotine, the sight, smell or taste of tobacco or smoke increases the desire to smoke. Nicotine intake appears to remain remarkably stable from day to day. Evidence exists that smokers tend

to adjust their intake, to some extent, to maintain stable plasma nicotine levels.⁴

Tolerance develops to nicotine as it does to many addicting drugs.¹ One doesn't just wake up one day smoking 30 cigarettes a day. The degree to which one is involved in smoking builds up over a period of time, usually years.¹¹

Physical dependence can develop to addicting drugs and is characterized by a withdrawal syndrome. Nicotine is no exception.¹ Withdrawal from nicotine, however, is not as dramatic, and sometimes life-threatening, as that from alcohol. It more resembles withdrawal from central nervous system stimulants such as cocaine and amphetamines. Following sudden smoking cessation, or attempts to cut down, withdrawal symptoms (Table 2) occur within hours and tend to be disturbing. Intensity varies greatly from person to person.⁷ Most symptoms decrease significantly over three weeks. The symptoms are greatest during the first week. During the second week they tend to gradually decline, or in some patients increase slightly. They continue to decline during the third week. Few subjects have withdrawal symptoms, other than occasional craving, after 21 days. Heavy smokers generally have more severe withdrawal symptoms than light smokers, probably due to greater physical dependence on nicotine. Tapering may result in more intense craving than sudden cessation.¹²

As with other drugs of abuse, relapse is a common occurrence with nicotine dependence. Less than two in ten succeed in the first effort. After seven or more attempts less than half succeed.⁴

The addictive characteristics of nicotine are summarized in Table 3.

The critical factor for developing nicotine dependence is exposure. A variety of factors contribute to this, including greater social acceptability than other drugs, relatively low cost, ready availability and promotion by the tobacco industry which is a 20 billion dollar business providing tax revenues annually in excess of 10 billion dollars to state and federal governments.⁴ The tobacco industry makes a considerable effort to promote tobacco, not only as an acceptable form of drug abuse but as a highly desirable form as well.¹ Its rate of expenditure to advertise and market tobacco products is approximately 2.5 billion dollars per year in the United States alone.⁴

Leading national and international organizations have recognized chronic tobacco use to be a drug addiction. These include the American Psychiatric Association, the United States Public Health Service, and the World Health Organization.^{1, 2}

TABLE 2
NICOTINE WITHDRAWAL SYNDROME

Decreased Heart Rate
Restlessness
Dullness or Sleepiness
Inability to Concentrate
Irritability
Feelings of Hostility
Sleep Disturbances
Altered Rapid Eye Movement (REM) during sleep
Slowing of EEG with Decreased Arousal Pattern
Constipation or Diarrhea
Weight Gain
Nicotine Craving

From Milhorn, H. Thomas, Jr., *Nicotine Dependence*. American Family Physician, 39:214-224, 1989.⁹

TABLE 3
ADDICTIVE CHARACTERISTICS OF NICOTINE

Causes psychoactive effects (euphoria, stimulation, relaxation)
Compulsive use occurs
Continued use occurs despite known harmful effects
It is reinforcing
Regular and temporal patterns of use exist
Deprivation increases desire to use
Paired stimuli increase use
Tolerance develops
Physical dependence occurs
Withdrawal syndrome occurs
Has high relapse rate

From Milhorn, H. Thomas, Jr., *Nicotine Dependence*. American Family Physician, 39:214-224, 1989.⁹

Treatment of Nicotine Addiction

Five stages of quitting have been identified: (1) Precontemplation — In this stage patients are unlikely to be responsive to direct intervention. They have little concern about the negative aspects of smoking, and heavy-handed messages to this group may increase their resistance to quitting. If pushed hard they will simply find another physician. Calm, factual presentation of the risks in a low-key and matter-of-fact manner is the best approach. (2) Contemplation — In this stage, patients are much more open to receive information about smoking and its dangers. In fact, they will often ask for help. (3) Action — This is the stage of quitting. (4) Maintenance — This is the most difficult stage of all. It involves remaining abstinent from cigarettes. And (5) Relapse — Relapse occurs so frequently in patients attempting to give up cigarettes that it has to be considered part of the quitting process.¹¹

Methods of Treatment

Continued tobacco use is encouraged by social, psychological and pharmacological factors. Effective treatment must address all of these.¹ Ideally, it should consist of alleviating withdrawal symptoms and teaching new behaviors. It is not adequate to advise patients to switch to pipe or cigars because they will probably continue to inhale. Tapering has been shown to be inferior to sudden cessation as a method of quitting.⁷ However, the patient who is unwilling to set a date and quit may benefit from tapering. If they are successful at this they may have the confidence to try to stop. Approaches with multiple components have been shown to be more effective than those with single components.³

Smoking Cessation Materials/Groups. A variety of resources are available to those who wish to stop smoking.⁸ Smoking cessation kits for health professionals and videotape cessation programs are available from a number of local and national health agencies. (see Table 4).

Local universities and hospitals often offer smoking cessation programs and local private practitioners, such as health psychologists, can be helpful.

Pharmacological Approaches. Pharmacological approaches to smoking-cessation that have been studied include nicotine fading, nicotine-containing gum, clonidine, mecamylamine, and various anticholinergic agents.

Nicotine fading consists of gradual reduction of nicotine consumption by changing to brands with less tar and nicotine and progressively smoking fewer and fewer cigarettes. Smokers tend to compensate for the reduced nicotine in each cigarette by taking more puffs, inhaling deeper and prolonging smoking of each cigarette. For obvious reasons, this approach, when used by itself, has a limited impact on smoking cessation. A variant of this approach makes use of a series of dilution filters which progressively mix more air with the smoke in hopes that the smoker can gradually decrease his nicotine intake to zero. This approach suffers from similar shortcomings.³

Nicotine-containing gum (Nicorette[®]) consists of 2 mg of nicotine and a polycrilex exchange resin. It should be started only after smoking has stopped. The rapid nicotine blood levels obtained from smoking are not achieved from chewing the gum. The average daily dose is eight to ten pieces but more can be, and probably should be, used. Smokers tend to under-utilize the gum, thus limiting its effectiveness. Heavy smokers with signs of physical dependence are the best candidates for the gum.¹³ As

TABLE 4

SOURCES OF SMOKING CESSATION MATERIAL

National Offices

- American Academy of Family Physicians, Health Education Department-A, 8880 Ward Parkway, Kansas City, MO 64114-2797
- American Heart Association, 7320 Greenville Avenue, Dallas, TX 75231
- Health Promotion Group, Inc., PO Box 59687, Homewood, AL 35259
- Lorimar Home Video, 17942 Cowan, Irvine, CA 92714; or call 1-800-323-5275 to order by credit card
- National Audio Visual Center, Customer Services Section, 8700 Edgeworth Drive, Capital Heights, MD 20743-3701
- National Cancer Institute, Office of Cancer Communications, Bldg. 31, Room 4B43, Bethesda, MD 20892
- National Heart, Lung, and Blood Institute, Smoking Education Program, National Institutes of Health, Bldg., 31, Room 4A-18, Dept. A-1, Bethesda, MD 20892
- Office on Smoking and Health, 5600 Fishers Lane, Park Bldg., Room 110, Rockville, MD 20857

Local Offices/Divisions

- American Cancer Society. See local telephone directory
- American Heart Association. See local telephone directory
- American Lung Association. See local telephone directory

From Milhorn, H. Thomas, Jr. Nicotine Dependence. American Family Physician, 39:214-224, 1989.⁹

many as 10 percent of gum users may become dependent on it. To minimize this, prescriptions should be given on a restricted basis.³ Ideally, tapering should occur over three to four weeks. The gum should not be prescribed for over three months. It does reduce the desire to smoke, although it does not eliminate it, and withdrawal symptoms are lessened.¹⁴ The gum is most effective when combined with clear-cut treatment plan.¹⁵ It is the only medication approved by the Food and Drug Administration for smoking cessation.

Pharmacological agents currently under study for smoking cessation include clonidine (an α -2 adrenergic agonist), mecamylamine (a centrally acting nicotine blocking agent) and several anticholinergic agents (atropine, scopolamine, chlorpromazine) which are thought to attenuate withdrawal symptoms by preventing the acetylcholine rebound that occurs following smoking cessation. At the present time there is insufficient information on all of these agents to justify routine prescription for smoking cessation.^{10, 16, 17, 18}

Relapse

Relapse occurs so often in those attempting to quit smoking that it must be considered part of the smoking cessation program. Circumstances leading to relapse generally vary with time from the moment

of quitting. The most common reason given for relapse in the first week is withdrawal symptoms. After the first week, coping with crisis situations and exposure to smoking triggers, such as the presence of other smokers or the consumption of alcohol or coffee, are prominent reasons. The majority of crises occur at work or involve family situations, most commonly an argument with the spouse or other family member or serious illness of a family member. Inactivity and boredom are also dangerous situations. Relapses during the first week are more apt to occur in the home and in the evening. After the second week they are more apt to occur outside the home.^{19, 20} The patient should not view relapse as a failure but should learn from the reason he relapsed. He should set another quit date and include the reason for relapse in his revised maintenance program. He should receive continued support and encouragement. The best predictor of relapse may be the quality of support from family, friends and co-workers.¹¹

Role of the Physician

Seventy-five percent of adults in the United States make at least one visit to the physician each year, with the mean yearly number of visits being five. Thus, for the majority of physicians, the opportunity for approaching smoking cessation will come in the office.³

The smoking history should be part of every medical history. It should include questions such as: (1) does the patient smoke, (2) if so, how much does he smoke, (3) how long has he smoked, (4) how early each day does he smoke, (5) what type of cigarettes does he smoke, (6) has he ever tried to quit, (7) reasons for success or failure, (8) does he smoke in public or in restricted places, (9) does he smoke when he is ill, and (10) why does he smoke? These questions are aimed at determining the degree of nicotine addiction as well as building on past successes and failures.³

During the physical examination, abnormalities related to smoking should be emphasized as they are found. These might include cigarette stained fingers, smoker's lines and crow's feet on the face, pulmonary rales or rhonchi and increased resonance on percussion.³

For every patient who smokes, the physician should determine their interest in quitting. If it is determined that the patient is in the precontemplation stage and not ready to make an attempt, recommendations and materials can be supplied that may orient him toward cessation at a later date. He

should be encouraged to cut down. If the patient is judged to be in the contemplation stage, the physician should determine the reason the patient is thinking about quitting. This can be used to reinforce the quitting effort.

For smokers who desire to quit, the physicians may choose to: (1) furnish the patient with self-help material, (2) work with the patient himself using material supplied for this purpose by several organizations or (3) refer the patient to a community smoking cessation program. Like many other things in medicine, the physician should decide which one of these approaches he is most comfortable with and use it regularly.

The physician may wish to prescribe nicotine gum to be used once smoking has ceased. If he plans to refer the patient to a community program he should be sure this is compatible with that program. After a steady-state dose has been reached, the gum should be prescribed in a tapering dose over three to four weeks. It should not be prescribed for over three months. The risk of addiction to the gum is real and significant. Simply prescribing the gum as if it were a "magic bullet" is ineffective and is to be discouraged.^{8, 21, 22, 23} The reader is referred to the package insert for directions for its use, contraindications and side effects.

A major obstacle to abstinence is weight gain, either feared or real. This must be addressed. Increasing exercise and planning good nutrition for weight maintenance are essential.²⁴

Some of the immediate consequences of smoking cessation include improved ability to breathe, decreased cough, regained sense of taste and smell, saved money, fresh breath, no more burn holes, no ashtrays to empty, no more tobacco stains on teeth and fingers, better insurance risk, decreased risk of passive smoking on family and co-workers and improved exercise tolerance.³ The physician can take advantage of these and use them as early positive reinforcement.

The physician should encourage patients to call if they relapse so that the reason can be identified and used in a revised maintenance program after a new quit date has been set.³

An attitude by the physician that smoking is merely a habit rather than a true drug addiction can be an impediment to successful treatment. If the physician chooses not to counsel patients, the minimum intervention should be to explain the health risks to him and advise him to quit. Five to ten percent of smoking patients will quit simply on the advice of their physician.⁸

Conclusion

Nicotine is a psychoactive drug with actions that reinforce the use of tobacco, leading to continued use despite known adverse health consequences. As a result, cigarette smoking continues to be the largest single preventable cause of death and disability in the United States. The pharmacological and behavioral processes that determine nicotine addiction are similar to those that determine addiction to heroin and cocaine. Treatment of nicotine addiction should be more widely available and should be considered at least as favorable by third party payers as treatment of alcohol and illicit drug addiction.

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Acknowledgement

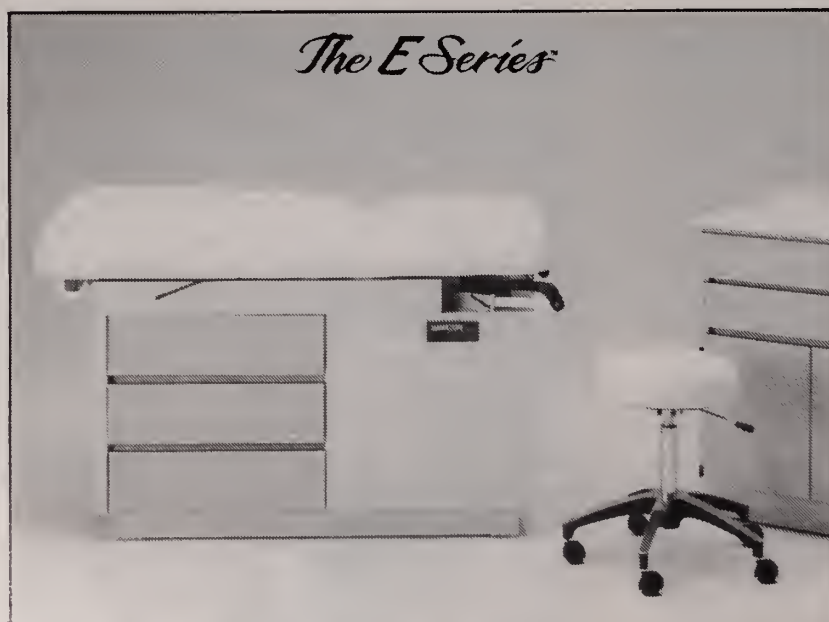
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Hospital Emergency Departments in Mississippi

MICHAEL H. BROSS, M.D.

FRANK M. WIYGUL, M.D.

Jackson, Mississippi

MISSISSIPPI HAS over 100 hospitals that offer emergency services. There is wide variation in the services provided and the number of patients treated. Hospital emergency departments are expected to provide care for both medical and surgical emergencies. Since trauma patients require a tremendous range of hospital resources for optimum outcome, trauma care will be utilized as the model for assessing emergency department capability.

In the United States, trauma is the leading cause of death in the first four decades of life.¹ The first two hours after injury have been referred to as the "golden hour" for critically injured patients, with death often occurring from potentially treatable injuries such as intracranial bleeding, ruptured spleen, laceration of the liver, and multiple fractures.² Studies have shown that 20% to 30% of the trauma deaths are preventable.³ The economic cost of trauma was estimated to be \$107.3 billion dollars in 1986⁴ and is rising yearly.

The purpose of this study is to describe and statistically analyze hospital emergency departments in Mississippi. This information should be useful for the future planning and coordination of emergency services.

Methods

The information presented in this study is derived from the most recent data available from the Mississippi State Department of Health, Division of Health Facilities Licensure. The data was obtained by the Division of Health Facilities Licensure and the American Hospital Association through their annual fiscal year 1987 Hospital Questionnaire. All of the non-federal hospitals in Mississippi that reported having an emergency department in the hospital or on the hospital grounds are included.

From the Department of Family Medicine, University Medical Center, Jackson, MS.

This paper is a descriptive study of hospital emergency departments in Mississippi. Hospital emergency departments are analyzed according to the number of patient visits per day and the services available. The data indicate that rapid access of a trauma patient to a high volume, broad service emergency department is difficult in much of the state. The authors encourage the state to utilize recommendations of the American College of Surgeons to develop a statewide emergency medical system. They maintain that such a system would better match existing resources with the needs of emergency patients.

The utilization of each non-federal hospital emergency department was measured by the average number of visits per day, calculated by dividing the number of yearly visits by 365 (result rounded to nearest whole number).

The services offered by each emergency department were quantified by looking at both hospital capability and physician availability. Hospital capability was measured by the in-house presence of a computerized axial tomography scanner and/or a blood bank (two potential services); these services were either in the hospital or on the hospital grounds. Physician availability was measured by adding the number of different consultants on active or associate medical staff at each hospital. The physician consultants considered were: general surgeons, orthopedic surgeons, neurosurgeons, ophthalmologists, obstetric-gynecologists, anesthesiologists, internal medicine physicians, and pediatricians (total of eight potential consultants). Maximum emer-

gency department services were thus the sum of hospital capability (2) plus all physician consultants available (8), for a total of 10 services. These 10 services are among the essential and desired characteristics of trauma centers as outlined by the American College of Surgeons.²

Results

In fiscal year 1987, Mississippi had 108 hospital emergency rooms serving a population of approximately 2.6 million residents. Figure 1 shows the division of hospitals by the number of daily emergency visits. There were 69 hospital emergency departments in the state that served less than 20 patients per day. There were only 11 hospital emergency departments in the state that served 60 or more patients/day.

The emergency departments with over 60 visits/day are listed on Table 1. These eleven hospitals provided approximately 38% of the total emergency visits. University Medical Center treated the most emergency patients, averaging 151 visits/day or 5.7% of the total. North Mississippi Medical Center, Singing River, and Forrest County General were

TABLE 1
HOSPITALS WITH OVER 60 EMERGENCY ROOM VISITS/DAY

Hospital	Number of ER Visits/Day	%	District
University MC (Jackson)	151	5.7	V
North Miss. MC (Tupelo)	137	5.17	II
Singing River (Pascagoula)	112	4.22	IX
Forrest Co. Gen. (Hattiesburg)	105	3.69	VIII
Memorial Hospital (Gulfport)	91	3.43	IX
Miss. Bapt. MC (Jackson)	78	2.94	V
Hinds General (Jackson)	77	2.9	V
South Miss. State (Laurel)	70	2.64	VIII
Delta Med. Center (Greenville)	67	2.52	III
Golden Triangle Reg. MC (Columbus)	66	2.49	IV
Jones County Comm. (Laurel)	63	2.37	VIII

the remaining hospitals with over 100 emergency department visits/day.

The number of emergency departments in the state relative to the number of services offered is summarized in Figure 2. The services offered by the

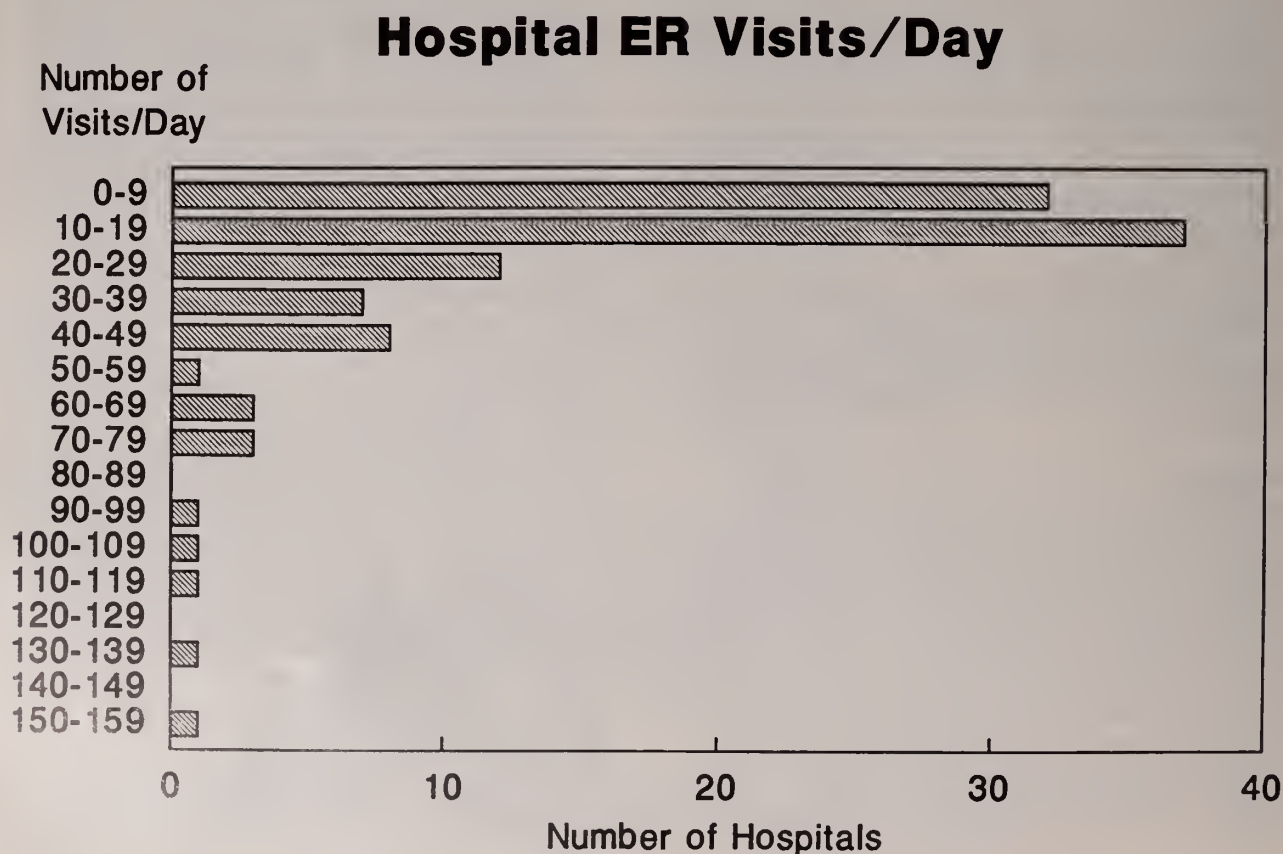


Figure 1. Hospital Emergency Department visits/day.

Number of Hospitals and Percent of Total Visits per Number of Services

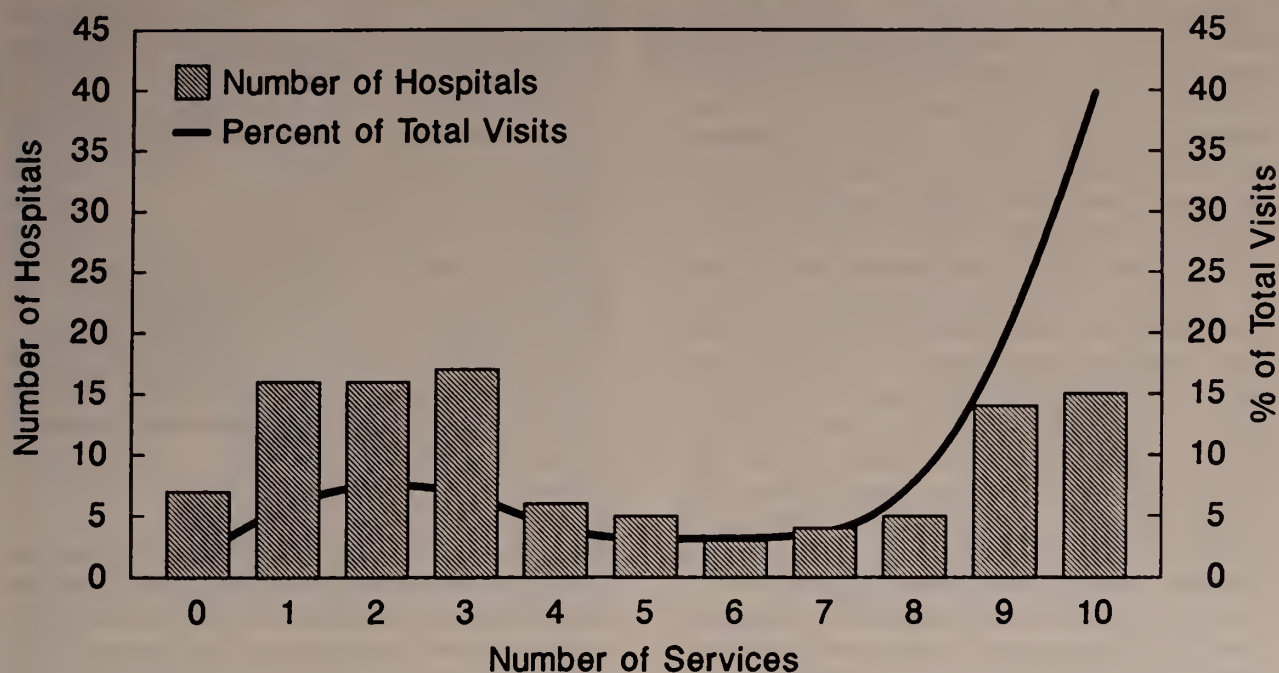


Figure 2. Number of hospitals and percent of total visits per # services.

hospital emergency departments ranged from 0 to 10. There was a bimodal distribution of hospital emergency departments in Mississippi, with many hospitals offering very few services and many hospitals offering most of the services. There were 56 hospital emergency departments (over half) in the state that offered three or less services. Most of these emergency departments were in small towns and served limited numbers of patients. There were 29 emergency departments (approximately one-fourth) that offered 9 or 10 services. These broad service emergency rooms served approximately 58% of the total patients.

The high volume and the broad service hospital emergency departments are both displayed in Figure 3. The 29 broad service emergency rooms were scattered throughout the state, encompassing all of the Public Health Districts. Only 10 of these 29 emergency departments had high patient utilization rates. (One of the high volume emergency departments, South Mississippi State, offered only two services.) The high volume emergency departments were largely clustered around the major population centers. Public Health Districts V and VIII each contained three of the high volume emergency

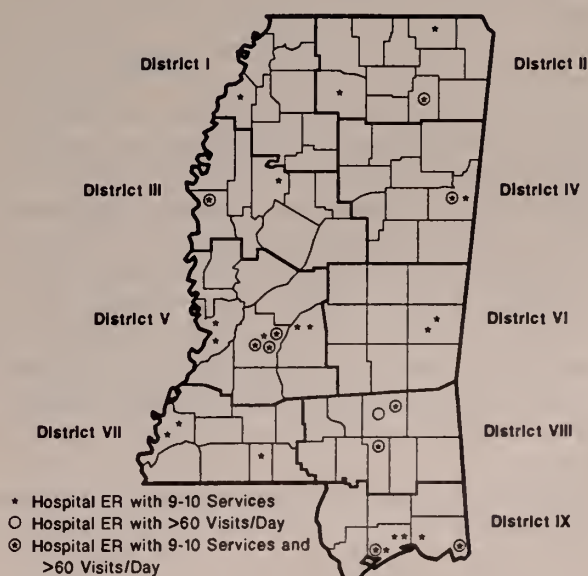


Figure 3. Hospitals by public health districts.

rooms. Public Health Districts I, VI, and VII did not contain a high volume emergency room.

Discussion

There are many hospital emergency departments

in the state with vast differences in size and services. It is noteworthy that 69 out of 108 hospital emergency departments were low volume with less than 20 visits/day. There were 56 out of 108 hospital emergency departments with 3 or fewer services. Small emergency departments can serve the vast majority of their patients well with sound medical management and appropriate referrals. Common emergency problems, such as cardiac arrhythmias, asthma, and minor injuries, are well addressed by capable personnel with limited equipment. However, the question arises whether small emergency rooms are able to deal with trauma patients. True trauma patients comprise approximately five percent of emergency room visits. Low patient volume in an emergency room makes it difficult, if not impossible, for physicians to maintain expertise in specific surgical skills. Small hospitals in Mississippi have been shown to be limited in both physician staffing and essential equipment. Many studies have shown that optimal trauma outcome is associated with immediate transport to an institution which can provide definitive care.⁵

There were 29 hospital emergency departments that offered 9 or 10 services. These emergency departments covered most of the state. Utilization rates revealed that only 10 of these 29 emergency departments were high volume, serving 60 or more patients per day. High patient volume is recommended for the optimal treatment of traumatic injuries.² High volume emergency departments were not found in Public Health Districts I, VI, and VII. The northern portion of Public Health District I is close to Memphis with its full emergency services. Public Health Districts VI and VII had several hospitals in the populated areas, probably preventing any one hospital emergency department from acquiring a high volume. It is also noteworthy that the eastern portion of Public Health District III is a considerable distance from a high volume emergency department. The rapid transport of an injured Mississippian to a high volume, broad service emergency department is, therefore, difficult in much of the state.

Mississippi does not have a formal system for

emergency medical services to field triage the seriously injured patient to an appropriately staffed and equipped facility. The prehospital providers of emergency care are typically bound by policies which direct them to transport to their supporting institution or the closest facility regardless of the condition of the patient.⁶ The benefits of immediately transporting the trauma patient to an adequately equipped and staffed facility have been clearly demonstrated.³ Increased effort in working with Emergency Medical Services is needed to insure that well-trained personnel are available throughout the state for field triage and transport. Once well-trained personnel are documented in the less populated areas, the liability of field triage will be minimized.

The American College of Surgeons² has outlined a comprehensive system of trauma care which encompasses both hospital and prehospital resources. These recommendations have been widely accepted and appear to significantly improve outcome. State authorities should be urged to utilize the recommendations of the American College of Surgeons to develop a statewide emergency medical system. Coordination and assignment of hospital emergency departments to differing levels of care is best directed on a statewide level. A statewide emergency medical system could approach the ideal of matching the capability of the hospital and its personnel to the severity of the injury.² ★★★

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Radiological Seminar CCXLXIII: Percutaneous Gastrojejunostomy — an Interventional Radiologic Procedure

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ENTERIC ALIMENTATION in patients with an intact and functioning gastrointestinal tract is the method of choice for maintenance of nutritional support. However, when per oral ingestion becomes impossible or dangerous for the patient, and the disability promises to be long-term, an alternative means for providing adequate caloric intake and other dietary requirements must be sought. This subset of patients would include those with various head and neck or other malignancies causing dysphagia and/or pharyngeal or esophageal obstruction; those with other debilitating diseases who need nutritional supplementation; and patients with central nervous system disorders that preclude oral feeding.^{1,2} Because long-term nasogastric intubation is generally poorly tolerated, surgical gastrostomy has been one of the few remaining alternatives until recently. However, an interventional radiologic procedure known as percutaneous gastrostomy and gastroenterostomy has emerged in recent years to rival the more traditional approach.

Percutaneous gastrostomy was first described in 1980 as an endoscopic procedure.¹ Success with percutaneous placement was seen in the radiologic literature during 1986.^{3,4} Since its inception, several major series have been published enumerating the advantages of the radiologic procedure over surgical and endoscopic placement; including lessened morbidity, improved cost-effectiveness, and ease of tube manipulation under direct fluoroscopic observation.

Sponsored by the Mississippi Radiological Society.

From the Department of Radiology, University Medical Center, Jackson, MS.

The authors describe the recent emergence of an interventional radiologic procedure, percutaneous gastrostomy and gastroenterostomy. They present a case report, and discuss indications, methods, and advantages of the procedure for some patients.

Case Report

Our patient, a 53-year-old black woman, was diagnosed with unresectable, undifferentiated large cell carcinoma of lung in March 1988. She had undergone external beam radiotherapy (total 6000 rads) and had received two courses of chemotherapy (VP₁₆ /cis-platinum) when she presented with worsening dysphagia, a productive cough, and one episode of hemoptysis. Initial chest film revealed right lower lobe consolidation. Barium esophagram showed a tracheo-esophageal fistula. A Dobhoff feeding tube was inserted initially. Subsequently, an esophageal stent was placed to prevent recurrent aspiration. However, another contrast esophagram showed flow around the stent, through the fistula, and into the tracheobronchial tree. A gastrostomy was believed indicated to maintain nutritional support and place the esophagus at rest. Because of concern about possibly dislodging the esophageal stent with the endoscope during percutaneous endoscopic gastrostomy (PEG), interventional radiology was consulted for percutaneous non-endoscopic gastroenterostomy placement.

With minor modification our procedural technique was patterned after that described by Alzate, et al.³ The patient was kept NPO after midnight the evening before the procedure was to be performed. Oral medications, if any, could be given, however, and intravenous access established. Oral contrast was prescribed at bedtime to provide faint opacification of colon by the following morning.

Initially, a puncture site was chosen in the left upper abdominal quadrant below the costal margin and at the lateral border of the rectus abdominis sheath, thus avoiding the course of the superior epigastric artery. Fluoroscopy was then used to confirm that the transverse colon was not interposed between stomach and anterior abdominal wall. In addition, ultrasound scanning over the intended puncture site documented a safe approach with respect to the left lobe of the liver.

In order to maintain gastric insufflation throughout the procedure, a small nasogastric tube was inserted under fluoroscopic guidance, particularly to avoid manipulating the patient's esophageal stent. Additionally, one milligram of glucagon was administered intravenously to achieve relaxation of gastric smooth muscle.

Following sterile preparation and local anesthesia, an 18 gauge needle was passed into the air-distended stomach under fluoroscopic observation. Then, utilizing several guidewire and catheter exchanges, a Carey-Alzate-Coons gastrojejunostomy catheter was manipulated through the pylorus and positioned beyond the ligament of Treitz into the proximal jejunum (see Figure 1). A Malecot-type retention device on the intragastric portion of the catheter was then engaged, and the external portion was sutured to the skin at the entrance site. Injection of contrast at the completion of the procedure confirmed the catheter position as within jejunum. The nasogastric tube was left to continuous low suction until the following day when feeding was begun. No procedure-related complications occurred, and the patient was soon discharged.

Discussion

Several advantages of the radiologic procedure over surgical and endoscopic gastrostomy are noteworthy. The risks of general anesthesia, required in 25% to 30% of operative gastrostomies, are avoided.⁵ Local anesthesia and parenteral sedative agents, such as midazolam (Versed), are administered. Also, direct visualization afforded by fluoroscopy allows manipulation of the catheter through the pylorus and



Figure 1: Percutaneous gastrojejunostomy. Percutaneous entrance site into stomach (thick black arrow). Malecot-type retention apparatus in gastric antrum (thin black arrow). Inverted cephalad-directed duodenal C-loop (curved arrow). Catheter tip with contrast injected to confirm position beyond ligament of Treitz in proximal jejunum (arrowhead).

duodenum and into the jejunum with ease, a feat not easily possible with surgical placement. With the catheter tip beyond the ligament of Treitz, little risk of gastric reflux and subsequent aspiration is encountered during feedings. Some series have shown this complication to be as high as 38% with simple gastrostomy.³

There is a favorable complication rate with the radiologic procedure as compared with the surgical morbidity. In most current series, major complications including peritonitis and gastrointestinal hemorrhage requiring laparotomy occurred in less than 2%.⁵ Similar complications from surgical placement range from 3% to 6%.⁵ Minor complications, such as medically-treated peritoneal irritation and stomal infection, occurred in less than 5% as compared with 6% to 10% at surgery.⁵ A greater number of complications have also been reported for PEG.⁵ With this procedure the endoscopist must puncture toward the lighted end of the fiber optic endoscope, so that he or she cannot be certain of avoiding bowel or left lobe of the liver. However, endoscopic placement can be done at the bedside, and there is no exposure to radiation.⁵

Finally, there is the issue of cost containment.

The radiologic procedure requires no operating room time or expense. It can be accomplished with fewer personnel and in a more timely fashion. Also, due to fewer complications, the length of hospital stay could be substantially reduced. It is evident that the role of the interventional radiologist continues to evolve and radiologic percutaneous gastrojejunostomy placement will likely have an increasing part to play in patient management in the future.

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What Is Your Medical Practice Worth?

CECIL W. HARPER, C.P.A.

Jackson, Mississippi

WHAT IS YOUR MEDICAL PRACTICE WORTH? Simple answer? Not really. Determining the value of any business interest, much less a medical practice, is not an exact science. Yet, upon retirement, practice sales or other ownership transitions, this question must be answered. Unfortunately, in many instances, medical practices are valued using generic approaches not properly adapted to a medical practice with the end result being an improper valuation and someone coming up short.

In most cases, a medical practice valuation is approached from the standpoint of first, valuing the individual components of assets and liabilities within the practice to determine what is referred to as net tangible assets. A total practice value would then be determined by adding the net tangible assets to any intangible values computed for goodwill as discussed below. Some common elements encountered in the valuation of a medical practice and the common approaches for the valuation of each are described below.

Accounts Receivable

Normally, accounts receivable, if sold, are valued at face amount less allowances for uncollectible accounts and collection costs. In most cases involving an entire practice sale, however, the seller normally retains the accounts receivable, collects them and retains the related cash.

Equipment, Furniture and Fixtures

The two practical approaches used in valuing

equipment, furniture and fixtures are book value and market value. The book value approach involves the original asset cost information less depreciation to date that is normally available in the detail accounting records of the practice. Although not theoretically superior, the book value approach is simple and easy and normally requires little additional efforts in the valuation process.

The market value approach would involve obtaining an appraisal from someone experienced with any specialized equipment associated with your practice or in the case of basic office furniture and equipment, vendors familiar with the assets involved. Market value amounts would be based on the equipment, furniture and fixtures "as is," not necessarily new furniture and equipment at replacement cost.

Leasehold Improvements

Leasehold Improvements represent additions to leased real property being used by the practice. Rights to these assets are determined based on contractual terms specified in the related lease agreement. Most lease agreements call for these assets to revert to the lessor at termination of the lease. However, depending on the remaining lease term, the buyer's intention to practice out of the existing facility may indicate a value to the buyer. This value would normally be based on the original cost less a reasonable allowance for depreciation since the original purchase or installation. This reasonable allowance is normally at least 50% on these type assets.

As a caution, when valuing leasehold improvements, be sure that the lease contract does not require the lessee to replace or restore present facilities

Mr. Harper is a Certified Public Accountant with Emerson, Stokes, Elliott and Harper, of Jackson, MS.

to their original condition. This may, in essence, be treated as an obligation under the lease, rather than an asset.

Office Leases

Office leases normally create value only in situations where the lease terms call for rental rates that are below the market rate for the particular practice location. For instance, if the monthly rent currently charged for similar space and facilities is more in the market place than that of the existing lease by, for example, \$200 per month and there are 24 months remaining on the lease, then the value of the existing lease would therefore be \$4,800 ($\200×24 months). Present value discounting factors should normally be applied for values involving lease terms that are greater than 12 months using the prime rate as the discount factor.

Medical Supplies

Medical supplies usually do not involve very large amounts in the valuation process. However, their value can be determined based on original purchase cost, market value based on current prices, or a basic estimate from historical financial information. For the latter approach, two months' supplies of drugs and other medical supplies are normally maintained on hand in a physician's practice. So, therefore, one-sixth of the previous year's supply cost may be a reasonable estimate for such a value for drugs and medical supplies. Obviously, this estimate would need to be reviewed carefully to ensure that it is a reasonable value for the quantities of drugs and supplies on hand. Allowances should also be made for slow-moving or unusable items, and, as a reminder, FDEA (Federal Drug Enforcement Administration) approval may be required before buying or selling controlled substances involved in a practice sale.

Patient Records

A patient/physician relationship is a confidential and personal relationship and, as such, patient records and files are documents associated with this same relationship. In most instances, little or no value is attributed to patient records in a practice sale because of the questionable rights to sell patient records. In situations where an intangible value is needed for patients charts and records, a value can be estimated by attributing a portion of the practice net income to each patient and using appropriate patient turnover ratios and present value techniques arriving at an estimated value.

Work-in-Process

The value of any work-in-process (should your practice specialty allow for such) will be based on the continuing physician's normal billing rate multiplied times the remaining work to be done for each procedure. Any procedures that require reworking should be approached the same way with the result being subtracted from the work-in-process asset computation above.

Real Estate Owned

Real estate should normally be valued separately from a medical practice as these are entirely different assets. A competent appraiser familiar with your particular real estate market should be retained to properly value the real estate involving the practice.

Goodwill

This intangible asset is the most difficult to value in a medical practice. It represents that "something extra" your practice possesses to enable it to generate earnings over and above normal earnings for the same specialty. Items adding to or creating goodwill are, for example, positive physician's reputation, popular practice location, excellent referral sources, limited number of physicians in the same practice area, positive supply-and-demand (both current and prospective) for a specific practice specialty, willingness of the selling practitioner to work with the buyer to maintain patient relationships, etc.

Goodwill may also be personal in nature attributed to a single physician practitioner or it may be concentrated on the practice and attributable to the practice as a whole. The most frequently used approach to determine a value for goodwill is based on the excess earnings (or formula) method. This method is used to compute goodwill based on the excess of average physician's earnings on an individual basis over "normal earnings" for the same physician specialty. These excess earnings are then capitalized (divided by) capitalization rates which can range from 20% to 100%. The higher the capitalization rate, the lower the goodwill value computed.

A detailed theoretical discussion of capitalization rates is beyond the scope of this article. However, suffice it to say, the capitalization rate represents a reasonable rate of return required by an investor for such an investment giving all the elements of investment risk. The capitalization rate used in most medical practice valuations is between 15% and 20%. The resulting goodwill would be combined

with the sum of the net tangible assets discussed in the previous sections, the result being the computed practice value.

Another consideration in computing goodwill that should be resolved is what is included in earnings for the physician or practice. Does it include physician's compensation, only, or compensation plus deferred compensation? The normal rule is to be consistent with the definition used in the "normal earnings" data obtained.

Normal earnings information is available through annual earnings surveys through *Medical Economics* and/or the American Medical Association.

In divorce proceedings, various state laws dictate how the assignment and/or determination of goodwill must be approached in many instances. For instance, in the State of Missouri, the Missouri Supreme Court recently in the divorce proceedings of *Hansen vs. Hansen* and *Graham vs. Graham* (both cases involving physicians) the following points were established:

1. Goodwill *does not exist* for purposes of a marital dissolution if it cannot be sold.
2. Professional goodwill (practice goodwill) must be distinguished from the personal goodwill of the practitioner to be assigned a value.
3. The market approach (recent comparable sales of similar practices) and the use of a buy-sell agreement are the only acceptable evidences of the existence of goodwill.

The above cases dictate very strong parameters for determining a value of goodwill in the state of Missouri.

All states vary as far as their approach to the valuation and recognition of professional goodwill, and, of course, Mississippi is no exception. If (heaven forbid) you are involved in divorce proceedings, you should consult professional advice concerning the goodwill value associated with your interest in a medical practice.

Other Practice Valuation Approaches

Discussed above is the general approach used in valuing a medical practice using the excess earnings (or formula) method. Categories of other general valuation approaches that could be used in valuing a medical practice include the following:

1. Discounted cash flow,
2. Discounted future earnings,
3. Comparable sales of similar practices,

4. Adjusted net tangible assets or book value method,
5. Multiple of revenue.

The discounted cash flow and discounted future earnings methods require projections of future practice operating results normally for a minimum of five years. A value (terminal value) of the practice at the end of the projected period is then computed. Using appropriate present value techniques, the cash flow or earnings and the terminal value are discounted to a current value, the result being the total medical practice value.

An analysis of comparable practice sales is beneficial in determining an appropriate value of a medical practice. However, the practices used as comparables must be just that, comparable, to your medical practice.

The book value method is virtually the same as discussed earlier in computing a value for the practice's net tangible assets. This method, however, allows for no goodwill value, which may be the largest asset in most medical practices.

The multiple of revenue approach is used quite frequently as a "rule of thumb" to test the reasonableness of other valuation methods used.

In most professional business valuations of a medical practice, the value of the practice would be computed under several different approaches to, again, test the reasonableness of the final computed value.

Also, valuations for federal income, estate and gift tax purposes should comply with IRS Revenue Ruling 59-60 and other similar rulings which detail certain requirements necessary for a valuation to be acceptable for tax purposes.

Conclusion

In summary, the purchase, sale, or termination of an interest in a medical practice is a large step in any physician's life. It is such a large step that it certainly deserves adequate attention and consideration by the physician. The AMA offers a booklet entitled *Valuing A Medical Practice, A Short Guide For Buyers and Sellers* which may be very helpful in these situations. ★★★

P.O. Drawcr 22888 (39225-2888)

References

1. Missouri Supreme Court states preference for market approach when valuing goodwill, Douglas K. Fejer, AM, CPA Business Valuation Review, December, 1988.



THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

Abortion: Treating Cause Instead of Result

Our nation's definitive judiciary body, the Supreme Court, has been anything but definitive in its recent decision concerning abortion issues. However, the decision in the Missouri case did put us all to thinking and rethinking the issue of abortion. Those individuals who already were concrete in their opinions, philosophy and beliefs, really had no rethinking to do. The pro-life and the pro-choice advocates have been handed a new lease giving them the authority to fight for what they believe is correct. However, the vast majority of us probably remain in our confused state about what we really believe and how we think about this issue.

I am sure that you, as I, have spent some time rethinking the issue, asking "When does life begin?" and "What is human life?" and considering the myriad of social, economic, moral, and ethical aspects of the whole abortion question. And perhaps you, as I, have vacillated in your beliefs and opinions depending upon which dogmatic opinion you have most recently been indoctrinated with by appearances in the media of those who claim to know exactly what is right.

For all of those, pro and con, who know that God is on their side and promotes their viewpoint, then there is no question about the course that they must take. However, for those of us (including probably the vast majority of our State Legislature), who really don't know what our God wants us to do, but can only pray for that Divine guidance on a daily basis, then perhaps we can look at the energy expense and time involved in arguing an issue for which there is no resolution and instead change the entire focus of our endeavor.

All of this is to say that possibly we are trying to make a decision about the *disease* and *treatment* thereof, rather than making a decision about *prevention* of the cause. I think both sides of the abortion issue agree that unwanted pregnancies lead to the ultimate problem. Perhaps it would be much more prudent in the long run to expend our energy, time and economic resources on prevention of unwanted pregnancies. The hormone theory notwithstanding, those young people, male and female, (maybe not just the young) with high self-esteem and good self-images

(Continued on next page)

Coming of Age in Mississippi

Times were in days past when "Coming of Age" meant getting that first driver's license; getting to use the family car for a date; getting to stay out until midnight on Saturday night; and just holding hands with a girl was the greatest thrill of all. Now, for many of our youth particularly here in Mississippi, all that has changed. For some teenage girls in our present social environment "Having a Baby" is their way of letting the public know that they have come of age. It means independence, maturity, peer acceptance, and perhaps even not having to go to that "dreadful ole school" again.

You have read articles in the statewide newspapers recently about teenage pregnancy statistics in the south, which is bad enough, but we here in Mississippi have a teenage pregnancy rate twice that of the national average.

In a recent year in our own state, 20 teenaged girls became pregnant each day. This resulted in 8,500 live births and 1,600 abortions or fetal deaths. Many teenage mothers are on welfare or have poverty level income, costing this state \$126 million per year, draining our funds to help the sick, disabled, and elderly who need the money so badly.

Further statistics show that of all live births in this state, 26% occur among girls aged 10 to 19, and 68% of these births are to unmarried mothers; 22% of teenage mothers delivered their second child.

Our own new president of the Mississippi State Medical Association, Dr. Ed Hill, has pioneered sex education in the public schools of this state. Now with the backing of our organization, the legislature, and the school systems, maybe we can get on with the business of sex education of our children so that we can do something about the epidemic of teenage pregnancy. Surely, it will take all of us

working together on this project to achieve success in overcoming this alarming state problem.

Margaret Mead could truly write an addendum to her book and entitle it "Coming of Age in Mississippi."

Thank God I'm a physician.

JOE JOHNSTON, M.D.
Associate Editor

PRESIDENT'S PAGE

(Continued from page 214)

are much less likely to be victims of sexual misconduct and resultant unwanted pregnancies.

Without going into all the information and all the study that lead up to this conclusion, I want to point out that perhaps comprehensive school health education — which is the teaching of decision-making skills with the ultimate purpose being the raising of individual self-esteem — would be the answer to the unwanted pregnancy problem. With that as the solution, there would be no need for all the *debate* over legalization or criminalization of abortion.

Let us encourage the treatment of the *cause* and *prevention*, not just the results.

The Journal welcomes your comments, suggestions and inquiries. Please address correspondence to the Editors, *Journal MSMA*, P.O. Box 5229, Jackson, MS 39296-5229.

Medico-Legal Brief

Special Fraud Alert

(Editor's Note: The following is printed verbatim from a publication distributed by the Office of the Inspector General of the Department of Health and Human Services.)

The Office of Inspector General was established at the Department of Health and Human Services by Congress in 1976 to identify and eliminate fraud, abuse and waste in Health and Human Services programs and to promote efficiency and economy in departmental operations. It carries out this mission through a nationwide network of audits, investigations and inspections. To help reduce fraud in the Medicare and Medicaid programs, the Office of Inspector General is actively investigating violations of the Medicare and Medicaid anti-kickback statute, 42 U.S.C. Section 1320a-7b(b). This statute is very broad. Among other things, it penalizes anyone who knowingly and willfully solicits, receives, offers or pays anything of value to induce or in return for—

(a) referring an individual to a person for the furnishing or arranging for the furnishing of any

item or service payable under the Medicare or Medicaid program, or

(b) purchasing, leasing or ordering or arranging for or recommending purchasing, leasing, or ordering any goods, facility, service, or item payable under the Medicare or Medicaid program.

Violators are subject to criminal penalties, or exclusion from participation in the Medicare and Medicaid programs, or both.

The Office of Inspector General has become aware of a proliferation of arrangements between those in a position to refer business, such as physicians, and those providing items or services for which Medicare or Medicaid pays. Some examples of the items or services provided in these arrangements include clinical diagnostic laboratory services, durable medical equipment (DME), and other diagnostic services. Sometimes these deals are called "joint ventures." A joint venture may take a variety of forms: it may be a contractual agreement between two or more parties to cooperate in providing services, or it may involve the creation of a new legal entity by the parties, such as a limited partnership or closely held corporation, to provide such services. Of course, there may be legitimate reasons to form a joint ven-

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ture, such as raising necessary investment capital. However, the Office of Inspector General believes that some of these joint ventures may violate the Medicare and Medicaid anti-kickback statute.

Under these suspect joint ventures, physicians may become investors in a newly formed joint venture entity. The investors refer their patients to this new entity, and are paid by the entity in the form of "profit distributions." These suspect joint ventures may be intended not so much to raise investment capital legitimately to start a business, but to lock up a stream of referrals from the physician investors and to compensate them indirectly for these referrals. Because physician investors can benefit financially from their referrals, unnecessary procedures and tests may be ordered or performed, resulting in unnecessary program expenditures.

The questionable features of these suspect joint ventures may be reflected in three areas:

- (1) the manner in which investors are selected and retained;
- (2) the nature of the business structure of the joint venture; and
- (3) the financing and profit distributions.

Suspect Joint Ventures: What To Look For

To help you identify these suspect joint ventures, the following are examples of questionable features, which separately or taken together may result in a business arrangement that violates the anti-kickback statute. Please note that this is not intended as an exhaustive list, but rather gives examples of indicators of potentially unlawful activity.

Investors

- Investors are chosen because they are in a position to make referrals.
- Physicians who are expected to make a large number of referrals may be offered a greater investment opportunity in the joint venture than those anticipated to make fewer referrals.
- Physician investors may be actively encouraged to make referrals to the joint venture, and may be encouraged to divest their ownership interest if they fail to sustain an "acceptable" level of referrals.
- The joint venture tracks its sources of referrals, and distributes this information to the investors.
- Investors may be required to divest their owner-

ship interest if they cease to practice in the service area, for example, if they move, become disabled or retire.

- Investment interest may be nontransferable.

Business Structure

- The structure of some joint ventures may be suspect. For example, one of the parties may be an ongoing entity already engaged in a particular line of business. That party may act as the reference laboratory or DME supplier for the joint venture. In some of these cases, the joint venture can be best characterized as a "shell."
- In the case of a shell laboratory joint venture, for example:
 - It conducts very little testing on the premises, even though it is Medicare certified.
 - The reference laboratory may do the vast bulk of the testing at its central processing laboratory, even though it also serves as the "manager" of the shell laboratory.
 - Despite the location of the actual testing, the local "shell" laboratory bills Medicare directly for these tests.
- In the case of a shell DME joint venture, for example:
 - It owns very little of the DME or other capital equipment; rather the ongoing entity owns them.
 - The ongoing entity is responsible for all day-to-day operations of the joint venture, such as delivery of the DME and billing.

Financing and Profit Distributions

- The amount of capital invested by the physician may be disproportionately small and the returns on investment may be disproportionately large when compared to a typical investment in a new business enterprise.
- Physician investors may invest only a nominal amount, such as, \$500 to \$1500.
- Physician investors may be permitted to "borrow" the amount of the "investment" from the entity, and pay it back through deductions from profit distributions, thus eliminating even the need to contribute cash to the partnership.
- Investors may be paid extraordinary returns on the investment in comparison with the risk involved, often well over 50 to 100 percent per year.

COMMENT

Emergency Department Use and Quality of Care

The hospital emergency department remains the only significant resource for the evaluation and initial care of true medical and surgical emergencies. Our article elsewhere in this issue demonstrates that there is a great variation in size of emergency departments according to the number of patients served and the presence of certain essential services.

Hospital emergency departments remain essentially unregulated and uninspected for the quality of service and qualifications of personnel. The Office of Emergency Medical Services was created in 1974 under the Mississippi State Department of Health and has legislated authority over emergency medical care. This office has advanced emergency care by requiring specific ambulance equipment and personnel, training and certifying emergency medical technicians, and creating Emergency Medical System Districts. As a statewide agency, the Office of Emergency Medical Services would be in the ideal position to assess and designate level of care for each hospital emergency department. Levels of hospital emergency department care for trauma have

been well outlined by the American College of Surgeons and have been shown to save lives. Although trauma care has been emphasized, many of the same principles apply to medical, surgical, pediatric, and obstetrical emergencies. Once emergency department levels of care are known, Emergency Medical Services can work to match the capability of the facility to the severity of the emergency as quickly as possible. Certain trauma cases can be field triaged directly to better equipped regional facilities. Other seriously ill or injured patients need safe and timely transport from facilities without essential services to better equipped regional or state facilities. We encourage physicians to actively assist the Office of Emergency Medical Services to improve emergency care for Mississippians.

MICHAEL H. BROSS, M.D.
FRANK M. WIYGUL, M.D.
Department of Family Medicine
University Medical Center
Jackson, MS

(Editor's note: This commentary is submitted as a supplemental note to the article on Hospital Emergency Room Departments, published elsewhere in this issue.)



Doctor,

Have you ever looked for a different way to say "Thank You," "Congratulations," or "Get Well Soon"?

All of these messages are available, along with memorial tributes, in greeting cards from the MSMA Auxiliary. Each card signifies your donation to the AMA-ERF in the name of a friend or colleague.

For information about AMA-ERF greeting cards for year-round use, contact a member of your local MSMA Auxiliary, or Karen Stephens, 1105 Oakleigh Dr., Hattiesburg, MS 39401; telephone 264-0154.

MEDICAL ORGANIZATION

ETV Videos To Supplement Health Education Curriculum

The Mississippi Authority for Educational Television is developing a televised instructional series on comprehensive health education for statewide broadcast and for use in the junior high and senior high schools of Mississippi.

In a letter of support for the project, MSMA president J. Ed Hill, M.D., noted that the association has been working very closely with the State Department of Education in developing a comprehensive health education curriculum for use in the state's schools. Dr. Hill pledged the support of many MSMA members through lending professional expertise and encouraging the kind of broad support necessary for the project.

The State Department of Education has mandated development of a comprehensive health education curriculum by fall 1990 and is urging all schools to implement at least a portion of the new curriculum. The ETV project offers an opportunity to integrate the video programming into the curriculum in the early stages.

The ETV proposal has received the endorsement of other medical and educational authorities in the state, including: Richard A. Boyd, Ph.D., state superintendent of education; Alton B. Cobb, M.D., state health officer; Robert N. Fortenberry, Ed.D., superintendent of Jackson schools, and W. Ray Cleere, commissioner of Mississippi Institutions of Higher Learning.

Implementation of the ETV program would be done with assistance of an advisory committee with representation from parents, local teachers, students and the medical profession. The project's components include: identification and assessment of need; determination of subject matter and format; preparation of scripts, and coordination of the content with the curriculum now being recommended by the state for use in local schools. The project will involve 8 to 12 fifteen-minute programs for junior high schools and a similar number for high schools. There will be a separate 30-minute program of instruction for teachers in the best use of the state's health education curriculum materials.

Absence of comprehensive health education has led to the inability of many of the state's young people to develop good health habits. Consequences of this lack of knowledge are evident in health sta-

tistics, a factor which has been integral in the MSMA's support for such education. Mississippi leads the nation in the percentage of live births to teenagers, and accidental injuries are the leading cause of death in Mississippians aged 15-24.

In his letter, Dr. Hill applauded the effort to provide a carefully planned video series to help meet the "urgent need" that exists for health education for the state's young people.

UMC Announces Faculty Appointments

Four have been named in appointments to the faculty of the School of Medicine at the University of Mississippi Medical Center.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs, announced the appointments following approval by the Board of Trustees of State Institutions of Higher Learning.

Appointed were Dr. Lin L. Chen, assistant professor of ophthalmology; Dr. David L. George, assistant professor of medicine; Kenneth R. St. John, assistant professor of orthopedic surgery and Michael J. Smith, instructor in radiology.

Dr. Chen earned the M.D. in 1973 at the National Taiwan University School of Medicine. She took her internship at the National Taiwan Hospital.

Dr. George earned the B.A., summa cum laude, in 1979 at Vanderbilt University and M.D. in 1983 at Emory University. He took his internship and residency at the University of Alabama at Birmingham, then worked as staff physician at the Clinic for Jefferson County Health Department in Alabama and Coastal Emergency Services. He had been a fellow in infectious diseases at the University of Chicago/Michael Reese Hospital since 1987.

St. John earned the B.S. in 1975 at the Rensselaer Polytechnic Institute and the M.S. in 1977 in bioengineering at Clemson University. He worked as a biomedical engineer with Abcor, Inc. until 1979, when he was named the research project leader for Osteonics Biomaterials.

Smith earned the B.A. in 1976 at Ole Miss and the M.B.A. in 1987 at Millsaps College. He worked with the Mississippi State Department of Health Division of Radiological Health from 1979 and in 1982 was appointed branch director for the division. He has been the radiation safety officer at the Medical Center since 1988.

MSMA Auxiliary Delegation Attends AMAA Annual Meeting



Members of the MSMA Auxiliary Delegation to the AMA Auxiliary meeting in Chicago had the special treat of seeing MSMA's own Jean Hill, center front, installed as 1989-90 president of the AMA Auxiliary. Pictured with her are, seated, from left: Mrs. Billy (Sylvia) Walker; Mrs. D. P. (Ruth) Smith; Mrs. Eric (Nancy) Lindstrom; and Mrs. Lee (Merrell) Rogers; and standing, from left: Mrs. Joe (Peggie) Herrington; Mrs. John (Dottie) Estess; Mrs. Ben (Kathy) Carmichael; Mrs. Stanley (Beth) Hartness; and Mrs. James (Jo) Waites. Jean is the wife of MSMA president J. Ed Hill, M.D.

Dr. Bush Installed As MAFP President

Dr. George R. Bush of Laurel was installed as president of the Mississippi Academy of Family Physicians at the Academy's recent meeting at Gulf Shores, Alabama. He succeeds Dr. Malcolm Moore of Tupelo.

Dr. James R. Stingily of Hazlehurst was named president-elect of the 600-member MAFP.

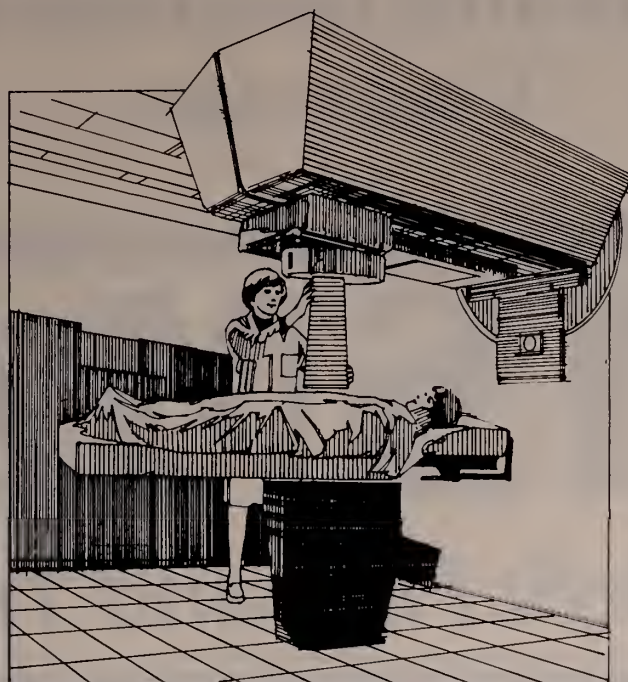
Dr. Eugene Wood of Jackson received the Academy's highest award during the meeting. He was named Family Doctor of the Year, and was recognized for his contributions to promote family medicine in Mississippi. The award was established in memory of Dr. John B. Howell, long-time Academy member.

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PERSONALS

VINOD ANAND of UMC presented a course at the International Symposium of Plastic and Reconstructive Surgery of the Head and Neck in Toronto, Ontario.

ORLANDO ANDY of UMC made a presentation at the meeting of the Southern Neurosurgical Society in Point Clear, Alabama.

Anesthesia Consultants, 1640 Lelia Drive in Jackson, announce the association of DAVID W. CRASTO and BERT A. WELCH, III, for the practice of anesthesiology.

BLAIR BATSON of UMC was examiner for the American Board of Pediatrics in Nashville, Tennessee.

J. JEFFERY BOYD announces the opening of his office at 425 Highway 51 North in Brookhaven for the practice of urology.

CHARLES F. BROCK, JR. has associated with Cleveland Clinic, P.A., Highway 8 East in Cleveland, for the practice of family medicine, including pediatrics, adult medicine and sports medicine.

WILLIAM G. BUSH has associated with Jackson Clinic for Women, P.A., 1030 North Flowood Drive in Jackson, for the practice of obstetrics and gynecology.

BILL CARLYLE had associated with Children's Medical Group, P.A., 800 Carlisle Street in Jackson, for the practice of pediatrics.

ROBERT COOPER of Oxford has been recertified as a fellow of the American Academy of Family Physicians.

WILLIAM R. CLEMENT of Gulfport was speaker at a meeting of Coast Counties Chapter of Medical Assistants of Mississippi.

WALLACE CONERLY of UMC was a site visitor at the Houston (Texas) Community College.

BRYAN COWAN of UMC was visiting professor at Piedmont Hospital in Atlanta, Georgia, and at Gulfport Memorial Hospital in Gulfport.

WILLIAM A. DAGGETT, III has associated with Jackson Anesthesia Associates, 508 Medical Arts Building in Jackson, for the practice of anesthesiology.

DENNIS DALE announces the opening of his office for the practice of pulmonary and critical care medicine at 103 Asbury Circle in Hattiesburg.

SUMAN DAS of UMC presented a paper at a meeting in Bermuda of the Southeastern Society of Plastic and Reconstructive Surgeons.

JAMES W. ERVIN, JR. has associated with the department of emergency medicine at The Street Clinic in Vicksburg.

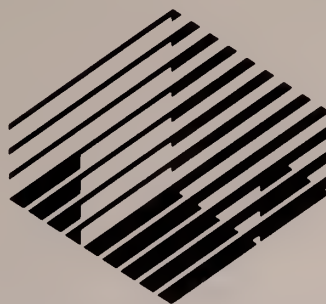
ALAN FREELAND of UMC was co-chairman for a course in internal fixation in hand surgery in Vail, Colorado.

RONALD W. GATEWOOD has associated with Radiology Associates, P.A., 235 South 12th Avenue in Laurel, for the practice of radiology.

JAMES O. GORDON of Tupelo presented a program on mobile lithotripsy in Boston, Massachusetts.

WALTER C. GOUGH of Drew has been appointed to the Domestic Mission Commission of the Christian Medical and Dental Society.

RONALD G. HAYTER has associated with Pascagoula Bone and Joint Clinic, 3615 Hospital Road in Pascagoula, for the practice of orthopaedic surgery.



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Tylertown/Wesson

Member FDIC

G. ELI HOWELL, II of Hattiesburg has been elected a member of the Southeastern Society of Plastic and Reconstructive Surgeons.

ANDREW H. KELLUM has associated with North Mississippi Hematology and Oncology Associates, 806 Garfield Street in Tupelo, for the practice of medical oncology and hematology.

MARK J. KELLUM has associated with Obstetrics-Gynecology Associates, 607 Brunson Drive in Tupelo, for the practice of obstetrics and gynecology.

WAYNE T. LAMAR of Oxford announces the association of ERNEST B. LOWE, JR. for the practice of orthopaedic surgery at 2168 South Lamar Boulevard.

HERBERT LANGFORD of UMC made a presentation at the national meeting in Washington, D.C., of the Association of American Physicians, the American Society for Clinical Investigation, and the American Federation for Clinical Research, and was a faculty member for the scientific meeting in New York of the American Society of Hypertension.

HAL T. LIDDELL of Hattiesburg has been certified as a diplomate of the American Board of Urology.

ROBERT H. LOPEZ announces the opening of his practice of internal medicine at 622 Goodyear Boulevard in Picayune.

JAMES S. MAGEE has associated with Brookhaven Children's Clinic for the practice of pediatrics.

RICK MARTIN of UMC made presentations at the 1989 Group Health Institute meeting in Atlanta and the Louisiana Perinatal Association meeting in Alexandria, Louisiana.

ALFRED E. MCNAIR, JR. of Biloxi announces the association of JESSE H. EZZELL, JR. for the practice of gastroenterology.

R. H. MIDDLETON of Biloxi has been recertified as a fellow of the American Academy of Family Physicians.

STAN MILLER has associated with The Medical Clinic, P.A., 746 Manship Street in Jackson, for the practice of gastroenterology and internal medicine.

JOHN R. MITCHELL has opened his office for the practice of family medicine at 183 South Main Street in Pontotoc.

GLENN F. MORRIS of Jackson announces the association of CYNTHIA E. ALLEN for the practice of family medicine at 1029 River Oaks Drive.

LEE MORRIS has associated with Bolton-Middleton Clinic, 169 Lameuse Street in Biloxi, for the practice of family medicine.

WILLIAM PARKER of Heidelberg recently was honored with "Dr. Parker Appreciation Day."

DAVID RUSHING has associated with Hull-Cooke Clinic, 1044 North Flowood Drive in Jackson, for the practice of obstetrics and gynecology, and the clinic's name has been changed to Hull-Cooke-Rushing Clinic.

W. RICHARD RUSHING has associated with Sanders Clinic for Women, 1041 South Madison in Tupelo, for the practice of obstetrics and gynecology.

OWEN PHILLIPS is leaving her practice with Obstetrics, Gynecology, Infertility Associates, P.A. of Pascagoula for a fellowship in genetics at University of Tennessee Medical Center.

SESHADRI RAJU of UMC was elected treasurer of the American Venous Forum during a recent executive committee meeting in New York and served on the faculty for the third International Workshop in Vascular Surgery in Larnaca, Cyprus.

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DONALD L. ROBERTS of Gulfport announces the association of DAVID J. FOREMAN for the practice of ear, nose and throat and facial plastic and reconstructive surgery.

GLENN RUSSO and PETER SIMONEAUX have associated with Tulane Dermatology Affiliates, 1730 14th Street in Meridian, for the practice of diseases and tumors of the skin.

GEORGE WILLIAM SHAAK has associated with Jackson Surgical Group for the practice of general and pediatric surgery.

ROBERT SMITH of UMC made a presentation at the International Workshop on Intracranial Aneurysms in Nagoya, Japan, and was a participant at the International Symposium in Intracranial Aneurysms in Omaha, Nebraska.

SHANE TUCKER has associated with Tupelo Ear, Nose and Throat Surgical Clinic, P.A., 618 Pegram Drive, for the practice of otolaryngology and head and neck surgery.

EDWARD TURNBULL of Laurel spoke on arthritis at a meeting of the Pine Belt Chapter of the AARP.

LYNN WALKER has associated with Madison-Yazoo-Leake Family Health Center for the practice of pediatrics.

MURRAY P. WHITAKER has associated with The Street Clinic in Vicksburg for the practice of cardiology.

JAMES L. WHITE has associated with Tupelo Bone and Joint Clinic for the practice of orthopedics and reconstructive surgery.

TED WILLIS announces the opening of his practice for ear, nose and throat, head and neck surgery and facial plastic surgery at 202 Drinkwater Boulevard in Bay St. Louis.

WALTER R. WOLFE announces the opening of his practice of obstetrics and gynecology at 1815 Hospital Drive, Suite 488, in Jackson.

ANN R. WOODBRIDGE announces the opening of her office for the practice of obstetrics and gynecology at 1037-A North Flowood Drive in Jackson.

THOMAS D. WOOLDRIDGE and JOHN W. COX of Tupelo announce the association of J. MARTIN LEE for the practice of nephrology and hypertension at 609 Garfield Street.

North Mississippi Medical Center Rehabilitation Institute in Tupelo announces the appointment of JEANNETTE ZURAWSKI as medical director of rehabilitation services.

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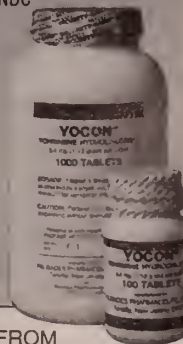
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References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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NEW MEMBERS

CUNNINGHAM, RICHARD JOHN, Wiggins. Born Freshwater, Canada, Aug. 9, 1949; M.D., Memorial University of Newfoundland Faculty of Medicine, St. Johns, Newfoundland, Canada 1974; interned one year, St. John's Teaching Hospitals, Newfoundland, Canada; elected by South Mississippi Medical Society.

ENNIS, CALVIN S., Escatawpa. Born Ontario, Canada Nov. 10, 1938; M.D., University of Toronto Faculty of Medicine, Toronto, Canada, 1962; interned Buffalo General Hospital, Buffalo, NY, one year; family practice residency, Rochester General Hospital, Rochester, NY, 1963-66; elected by Singing River Medical Society.

M McNALLY, EUGENE DAVID, Gulfport. Born Utica, NY, May 13, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned University Hospital, Pensacola, FL, July 1984-March 1986; family practice residency, Reading Hospital, Reading, PA, April 1986-June 1987; elected by Coast Counties Medical Society.

NAMIHIRA, YOSHINOBU, Vicksburg. Born Okinawa, Japan, April 15, 1952; M.D., Loma Linda University School of Medicine, Loma Linda-Los Angeles, CA, 1981; interned, internal medicine residency and gastroenterology fellowship, same, 1981-86; elected by West Mississippi Medical Society.

SMITH, DIANA LEE, Gulfport. Born Indianapolis, IN, Jan. 29, 1951; M.D., Hahnemann University School of Medicine, Philadelphia, PA, 1983; interned and internal medicine residency, University of Pennsylvania Medical Center/Presbyterian Hospital, Philadelphia, 1983-86; elected by Coast Counties Medical Society.

SMITH, MERVYN P., JR., Jackson. Born Clarksdale, MS, Nov. 27, 1946; M.D., University of Mississippi School of Medicine, Jackson, 1974; interned, internal medicine, and cardiology residency, 1974-80; elected by Central Medical Society.

WOODALL, BONNIE NOE, Jackson. Born Amory, MS, Sept. 26, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned one year and pediatric residency one year, Vanderbilt University Hospital, Nashville, TN; two-year pediatric residency, University Medical Center, Jackson, MS; elected by Central Medical Society.

YEARWOOD, THOMAS LAMAR, Pascagoula. Born San Antonio, TX, Sept. 7, 1950; M.D., Louisiana State University School of Medicine, New Orleans, 1983; interned and anesthesiology residency, University of Washington Hospital, Seattle, 1983-88; elected by Singing River Medical Society.

POSTGRADUATE CALENDAR

September

MODIFIABLE ASPECTS OF AGING:
SCIENTIFIC EVIDENCE AND CLINICAL APPLICATIONS
Sept. 14-15
Holiday Inn Medical Center, Jackson
ANNUAL MEETING OF THE AMERICAN ACADEMY OF
PEDIATRICS, MISSISSIPPI CHAPTER
Claude L. Batson Memorial Lecture
Sept. 15-16
Ramada Renaissance Hotel, Jackson

October

COMMUNICATIVE DISORDERS SYMPOSIUM
Oct. 27
University Medical Center

November

FALL CLINICAL MEETING OF THE AMERICAN COL-
LEGE OF SURGEONS, MISSISSIPPI CHAPTER
Nov. 11
University Medical Center
ELEVENTH ANNUAL MISSISSIPPI PERINATAL POST-
GRADUATE COURSE
Nov. 16-17
Ramada Renaissance Hotel, Jackson

For more information or a program brochure, contact the University of Mississippi Medical Center Division of Continuing Health Professional Education, 2500 North State Street, Jackson, Mississippi 39216-4505; or call (601) 984-1300.

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In an editorial in the September 1969 JOURNAL MSMA, the writer said, "The delivery system which purveys medical care to Americans is on trial. Agencies of government at all levels are hacking away at it, while voluntary prepayment and insurance sources are introducing subtle influences upon it. . . . Nobody claims that our basically free choice delivery system is perfect . . . but the system rests on bedrock of solid principles: the patient is free to choose, the practitioner may offer his services in a wide variety of clinical environments, and financing is broad, inclusive of almost every method and combination of putting together the means for care purchase.

"Yet, there is talk of strain and weakness in the care delivery system. And . . . perhaps too few

recognize with understanding exactly what pressures have been thrust upon it in the turbulent decade of the 1960s. Nor are we wanting for suggestions and proposals for resolving dilemmas, real and otherwise."

The writer continued, quoting President Nixon's prediction about the health care crisis: "unless action is taken both administratively and legislatively . . . within two or three years, we will have a breakdown in our medical care system which could have consequences affecting millions of people throughout this country."

Ten years later, the September 1979 JOURNAL MSMA reprinted comments by Senator John Stennis, concerning provision of health care: "I have faith in the capability of our nation to meet this challenge. . . . We have been tremendously successful in the development of quality health care. Surely we will also be successful in finding a way to make that health care affordable to those who need it."

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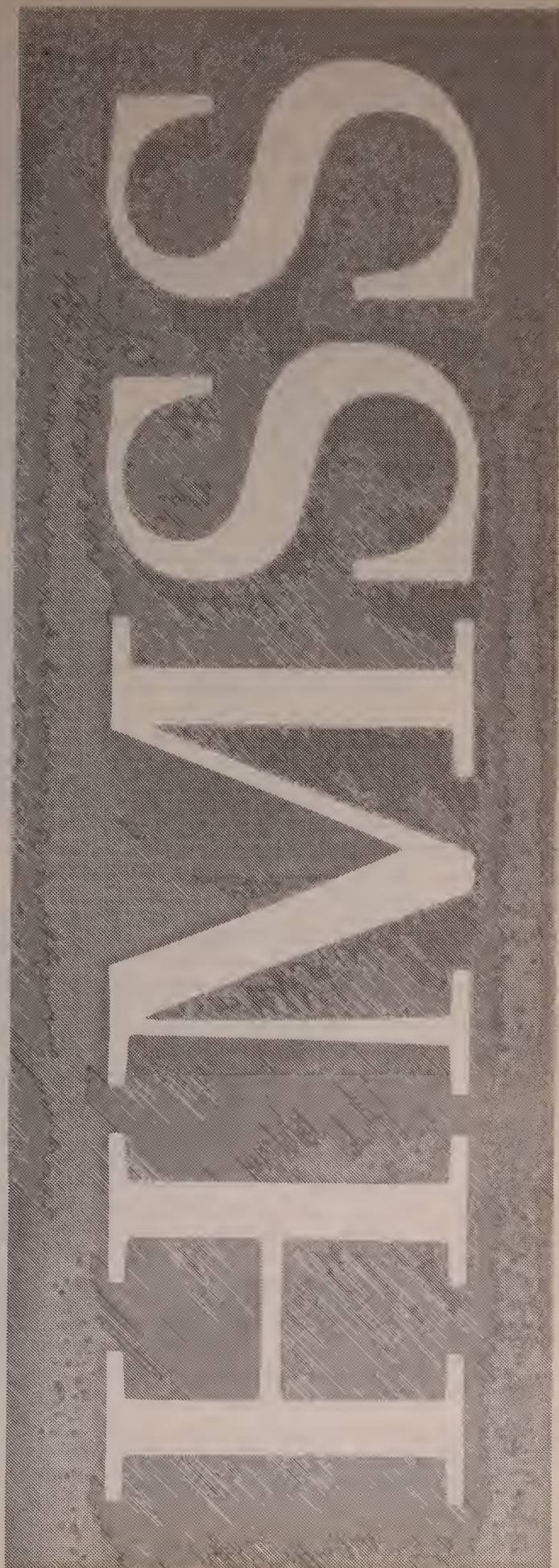
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References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list. Textbooks, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the *Index Medicus*, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

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**ROSALYN P. STERLING-SCOTT, M.D.**

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

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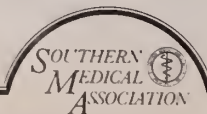
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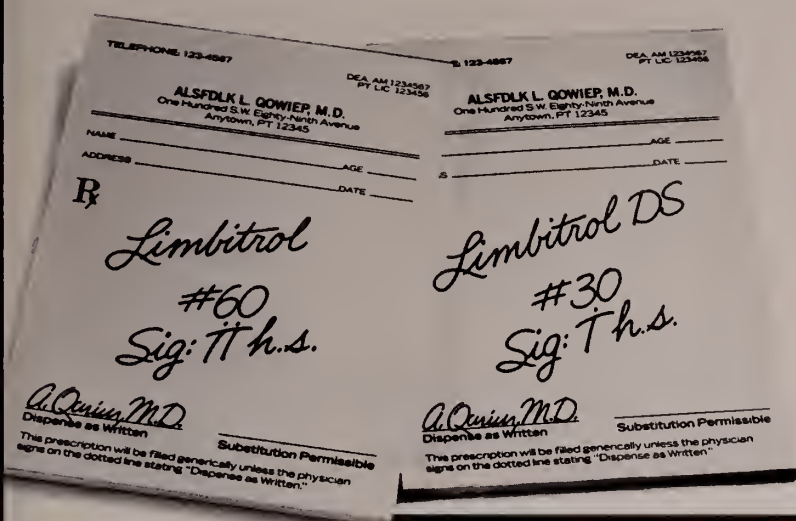
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Precautions: Use cautiously in patients with a history of seizures, in hyperthyroid patients, those on thyroid medication, patients with impaired renal or hepatic function. Because of suicidal ideation in depressed patients, do not permit easy access to large quantities of drug. Periodic liver function tests and blood counts recommended during prolonged treatment. Amitriptyline may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady-state concentrations of the tricyclic drugs. Use of Limbitrol with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Should not be taken during the nursing period or by children under 12. In elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects. Inform patients to consult physician before increasing dose or abruptly discontinuing this drug.

Adverse Reactions: Most frequent: drowsiness, dry mouth, constipation, blurred vision, dizziness, bloating. Less frequent: vivid dreams, impotence, tremor, confusion, nasal congestion. Rare: granulocytopenia, jaundice, hepatic dysfunction. Others: many symptoms associated with depression including anorexia, fatigue, weakness, restlessness, lethargy.

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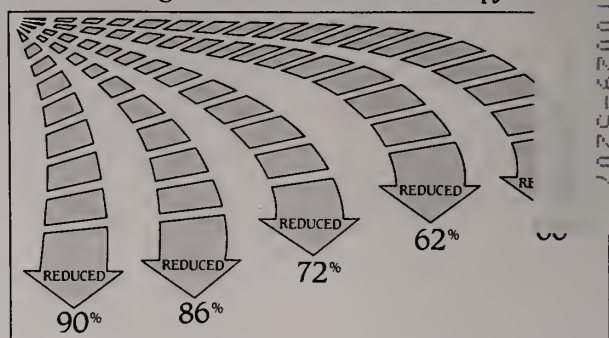
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JOURNAL



OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

OCTOBER

1989

ACUTE CARBON MONOXIDE POISONING: EMERGENCY MANAGEMENT AND HYPERBARIC OXYGEN THERAPY



Why Do Physicians From Around The U.S. Send Kids To One Atlanta Hospital For Old-Fashioned Care?

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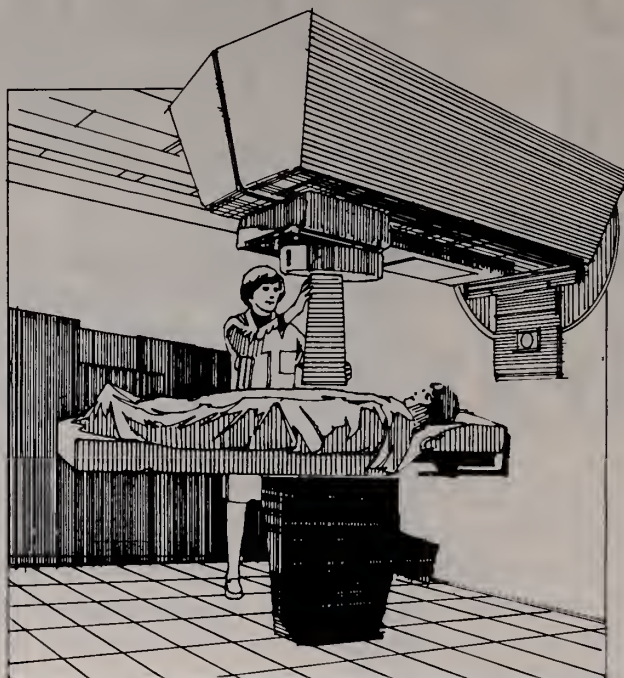
Executive Director

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THE JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION (ISSN 0026-6393) is owned and published monthly by the Mississippi State Medical Association, founded 1856, at 735 Riverside Drive, Jackson, Mississippi 39202. Subscription rate, \$25.00 per annum; \$35.00 per annum for foreign subscriptions; \$2.25 per copy, as available. Advertising rates furnished on request. Printed by The Ovid Bell Press, Inc., Fulton, Missouri. Second-class postage paid at Jackson, Mississippi, and at additional mailing offices. POSTMASTER: Send address changes to Mississippi State Medical Association, P.O. Box 5229, Jackson, Mississippi 39216.

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NEWSLETTER

October 1989

Dear Doctor:

The Rural Health Incentives Act (S.B. 1060) has been introduced in the U.S. Congress by Arkansas Senator David Pryor and three of his colleagues. The bill, which has the support of the AMA, attempts to encourage physicians to practice in rural health manpower shortage areas by providing a \$1,000 per month tax credit. If enacted, the bill could have an effect on 41 Mississippi counties which are currently classified as health manpower shortage areas.

The problem of physician shortages in rural Mississippi was among the issues addressed recently at a statewide conference on revitalizing rural areas. Dr. Ed Hill, MSMA president, was among the speakers.

A nationwide campaign to lower health care costs, particularly for rural citizens, was launched last month. "Health Equity Across the Rural U.S." (HEAR US) was developed by Communicating for Agriculture (CA), a rural advocacy group with members in 44 states. Among the goals are a two-year freeze on health care cost increases (limited to the rate of inflation) and tax deductions on health insurance premiums for the self-employed. Six other goals of the organization are: to urge development of risk pools in states; to urge Congress to provide equitable reimbursement to rural hospitals and take steps to encourage more physicians to practice in rural areas; to encourage enactment of tax-free health care savings accounts so individuals could pay for medical emergencies or purchase long-term care financing; to lobby for legislation setting limits on medical malpractice awards; to require all health coverage plans to use independent utilization review services; and to urge legislation requiring health care suppliers, including hospitals, physicians and pharmacists, to be subject to comprehensive state and federal review boards similar to those for utilities.

Make plans now to attend MSMA's 122nd Annual Session, May 30-June 3 in Jackson.

Sincerely,



Patsy Silver
Managing Editor

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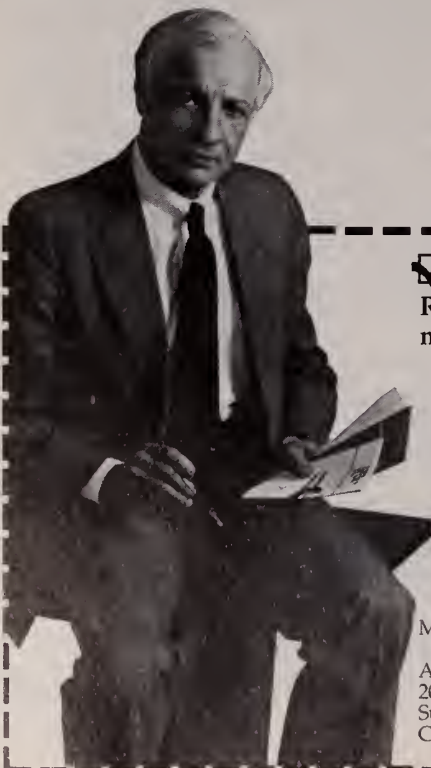
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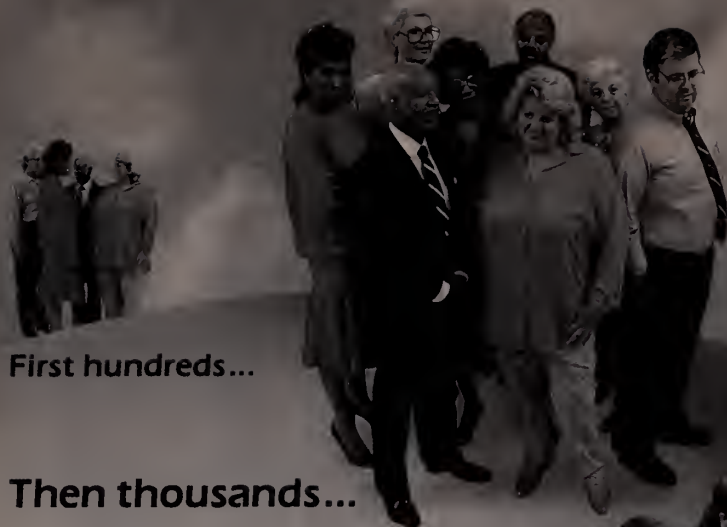
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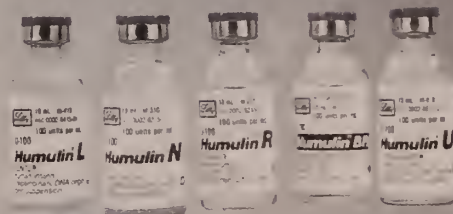
The clinical significance of insulin antibodies in the complications of diabetes is uncertain at this time. However, high antibody titers have been shown to decrease the small amounts of endogenous insulin secretion some insulin users still have. The lower immunogenicity of Humulin has been shown to result in lower insulin antibody titers; thus, Humulin may help to prolong endogenous insulin production in some patients.

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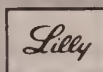
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DATELINE

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Jackson, MS - Applications are being accepted
now for scientific exhibit space at MSMA's
122nd Annual Session. The Annual Session gets

underway May 30, 1990, and will be held at Jackson's Coliseum Ramada Inn. Exhibitors should send a letter requesting scientific exhibit space to MSMA headquarters. Please provide the title of the exhibit, names of all exhibitors, and the estimated number of linear feet required.

October is "Talk About
Prescriptions Month"

Jackson, MS - Estimates indicate that half
the 1.6 billion medicines prescribed yearly
in the U.S. are misused. That's more than

1500 medicine mistakes every minute, says the National Council of Patient Information and Education, which is participating in "Talk About Prescriptions Month." Better communication about medications is encouraged, particularly for older Americans, for whom misuse is a nationwide problem.

MD-Owned Insurance
Companies Deter Malpractice

Chicago, IL - Physician-owned companies that
insure physicians against malpractice suits
are more effective than state licensing

boards in identifying and disciplining negligent physicians and in deterring substandard medical practice, says a study in the September 8 JAMA. The authors estimate that some 2,000 U.S. physicians lose their insurance due to negligence each year.

Health Problems
Of the Homeless

Chicago, IL - Nine out of ten men and eight
out of ten women in a sample of homeless
people suffer from mental illness, substance

abuse, or other psychiatric problems, says a study in the September 8 issue of JAMA. In addition to psychological problems, most of the homeless have multiple physical problems as well. The study recommends a comprehensive approach to solutions, suggesting local shelters as intervention points.

Mississippi Health
News Notes...

Jackson, MS - According to Blue-Cross/Blue
Shield of MS, state employees will now be
covered by its Key Physician Network, which

has some 1,450 physician participants...Workers' Compensation insurers are seeking a 29.1% increase in premiums due to increasing medical care costs...East Ms Medical Society has been commended for efforts to improve care for local indigent residents after closing of the charity hospital there.

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ORIGINAL PAPERS

Antenatal Assessment and Management of an Incomplete Obstructive Fetal Uropathy

ALLAN T. BOMBARD, M.D.

DAVID T. RIGDON, M.D.

WILLIAM E. ROBERTS, M.D.

and ROBERT L. ANDERSON, M.D.

THE ANTENATAL MANAGEMENT of fetal anomalies is problematic. This report outlines the clinical course of a patient who was referred to our clinic for genetic counseling on the basis of advanced maternal age. The fetus was noted to have a dilated urinary bladder without ultrasonographic evidence of renal parenchymal compromise or other physical abnormalities. Infants manifesting genitourinary anomalies often progress to develop renal dysplasia with secondary decreased renal function, oligohydramnios and possibly (lethal) pulmonary hypoplasia. Pregnancy termination was morally objectionable for this couple, therefore antenatal assessment by ultrasound and fetal cystocentesis was performed.

Herein we report the assessment and management of a fetus with incomplete obstructive uropathy from 13 weeks through successful delivery near term.

Case Report

The consultand was a 38-year-old G9 P3053 white female who was referred for genetic counseling and prenatal diagnosis owing to the risks of advanced maternal age and a child from a prior marriage with congenital adrenal hyperplasia (21-hydroxylase deficiency).

Following counseling, an ultrasound scan revealed a single viable intrauterine pregnancy of 13 weeks gestation. A 2.5 cm cyst was noted in the lower fetal abdomen with no other anomalies found. In particular, there was no evidence of hydroureter, hydronephrosis, abdominal wall defects or oligohydramnios.

The patient returned at 17 weeks corrected gestation for repeat ultrasound evaluation and genetic amniocentesis using standard technique.¹ Ultrasound examination demonstrated appropriate interval growth and normal amniotic fluid volume. The fetal abdominal mass noted 3 weeks earlier had doubled in size, with early evidence of ureteral and renal pelvic dilatation but without ultrasonographic renal parenchymal damage. The amniocentesis studies revealed a normal male fetal chromosomal complement (46,XY) and normal amniotic fluid alpha-fetoprotein (AF-AFP). Assessment of fetal renal electrolyte status was accomplished by fetal cystocentesis following amniocentesis but prior to removal of the needle. Fifty-five cc of clear fluid was

From the Department of Medical Genetics (Drs. Bombard and Rigdon) and the Department of Obstetrics and Gynecology (Drs. Bombard and Roberts) of the USAF Medical Center Keesler, Biloxi, MS; and the Department of Obstetrics and Gynecology (Drs. Bombard and Roberts) of the University Medical Center in Jackson, MS; and the Department of Obstetrics and Gynecology (Dr. Anderson) of the University of California at San Francisco, CA.

Presented at the 1988 meeting of the Air Force Clinical Surgeons, Oakland, California.

The views expressed in this article are those of the authors and do not reflect the official policy of the Department of Defense or the U.S. government.

obtained without difficulty from the fetal bladder and resulted in complete decompression.

Serial evaluations included weekly ultrasound evaluation, with cystocentesis being repeated for worsening signs of obstruction, usually at biweekly intervals. Ultrasound photographs taken during a typical cystocentesis procedure are shown in Figures 1 (beginning of aspiration) and 2 (end of aspiration). Although ultrasonographic evidence of abdominal distension, hydroureter and renal pelvic dilatation was present antenatally, oligohydramnios did not occur. Moreover, hydroureter and hydronephrosis resolved after each cystocentesis procedure.

The results of antenatal fetal renal electrolyte analysis are presented in Table 1. After the initial cystocentesis, all renal electrolyte values were in

TABLE 1
PRENATAL CYSTOCENTESIS RESULTS

Weeks Gestation	Volume cc	Sodium mEq/L	Chloride mEq/L	Osmolality mosm/L	L/S, (PG)
17	55	104	83	221	
19	160	78	55	159	
21	248	61	48	136	
23	205	63	47	132	
25	323	58	42	128	
27	372	59	50	132	
29					0.7:1, (-)
31	312	50	42	113	
33					1.4:1, (-)

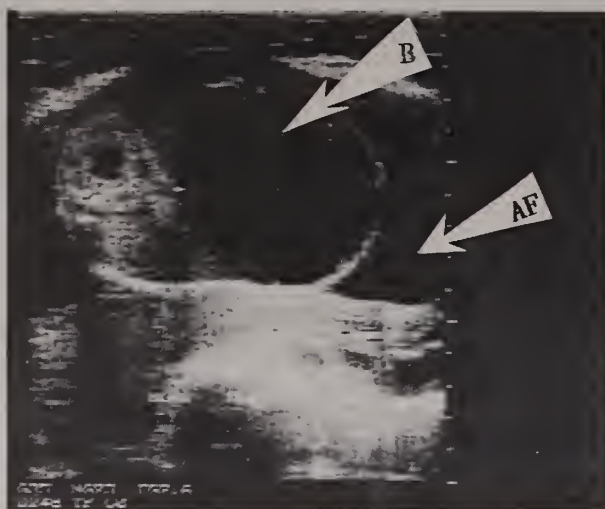


Figure 1. Cystocentesis procedure, beginning phase (B, fetal bladder; AF, amniotic fluid).



Figure 2. Cystocentesis procedure, end phase (note normal amniotic fluid volume).

the range assumed to be normal,^{2,3} ie, urine sodium < 100 mEq/L, chloride < 90 mEq/L and osmolarity < 220 mosm/kg. Referral for *in utero* surgical intervention (hysterotomy and cutaneous fetal cystostomy [RLA and colleagues, Univ. California San Francisco]) would have been accomplished on ultrasonographic or metabolic evidence of worsening fetal disease. None of the amniocentesis or cystocentesis procedures were followed by complications, maternal (infection, bleeding, persistent cramping or vaginal loss of amniotic fluid) or fetal.

At 34 weeks gestation the patient developed spontaneous labor; therefore, repeat (4th) cesarean section was performed.

A viable male infant with abdominal distension was delivered and transferred to our neonatal unit for observation. The infant had no dysmorphic features (see Figure 3). Testes were descended bilaterally. The infant manifested only atrial septal defect and patent ductus arteriosus, the latter thought to be secondary to prematurity. There was no evidence of pulmonary hypoplasia.

Distention of the urinary bladder was resolved without difficulty by inserting a percutaneous catheter and resulted in spontaneous drainage of 800 cc of clear urine. Creatinine clearance was approximately 50% of that expected for neonates. Urologic evaluation suggested intermittent obstructive uropathy secondary to partial posterior urethral valve.

Discussion

Assessment and management of fetuses with congenital anomalies is dependent upon early testing of couples at risk for these conditions. Guidelines for identifying these patients and offering prenatal diagnosis are well established.^{1,4}

Patients are commonly referred for genetic counseling and prenatal testing on the basis of a specific

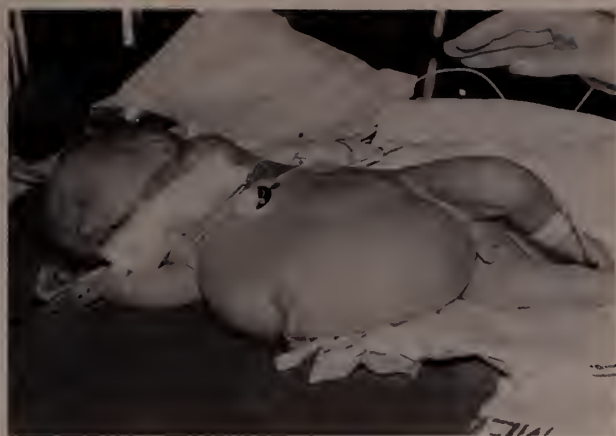


Figure 3. Infant after delivery.

indication, such as maternal age or other etiologies for increased risk of aneuploid offspring. However, first-line evaluation and elucidation of reproductive and family histories often reveals other concerns which merit attention as valid, unrecognized indications for prenatal diagnosis.

The antenatal assessment and management of ultrasonographically detected genitourinary anomalies is particularly complex. While *in utero* surgical therapy, reserved for infants with severe disease and worsening renal function, may offer hope for these infants, complications and fetal morbidity and mortality from such procedures is often significant.

Elias and Annas have succinctly reviewed criteria for fetal surgery.⁵ In their article the authors cite the following prerequisites for fetal surgery: (1) identification of affected fetuses, (2) delineation of disease(s) present, (3) ultimate potential for improvement and delivery of a more healthy, normal infant and (4) selection of conditions which warrant urgent treatment. Fetuses with normal chromosomal complements manifesting *in utero* obstructive uropathy meet the above criteria.

The infant in this case had obstructive uropathy, presumably due to incomplete development of a posterior urethral valve. The triad of absent abdominal musculature, urinary tract abnormalities and undescended testes are required to confirm a diagnosis of "Prune-Belly," "Triad" or "Eagle-Barrett" syndrome,⁶ but all were not present in this case. However, it is interesting to speculate that our serial cystocenteses may have modified the natural course of the syndrome resulting in a less severely affected infant. It is most likely that the inheritance of obstructive uropathy in this infant was of so-called developmental/multifactorial (single-organ system), rather than Mendelian etiology.

Fetal surgery is normally reserved for those conditions in which treatment must proceed antenatally and for which a more favorable outcome would be expected than if surgery were not performed. For example, few cases of fetal surgery for hydrocephalus are now being performed as studies have failed to indicate a consistently more favorable outcome with *in utero* surgery.⁷

Fetal surgery for obstructive uropathy, by means of hysterotomy and cutaneous cystostomy, has been performed with variable success.⁸ Infants manifesting severe oligohydramnios, with significant risk for pulmonary hypoplasia (Potter syndrome), or who have evidence of renal destruction, may be candidates for such a major invasive procedure. Prior to recent experiences reported by investigators at the University of California at San Francisco, infants *in extremis* would have been candidates for definitive therapy by serial cystocentesis or placement of indwelling catheters. These catheters function as a shunt between the fetal bladder and the amniotic cavity.^{9, 10, 11} Such procedures for severely affected infants appear to be less satisfactory than hysterotomy with cystostomy.

Recently, several authors have suggested that conservative management (observation) with delivery at term, may be appropriate for less severely affected infants.¹² Our case report illustrates as well that infants with antenatally detected obstructive uropathy, normal chromosomal complements and normal renal function may be managed antenatally without major surgical intervention. However, opportunities for referral to centers with experience in reparative fetal surgery should be anticipated if signs of renal deterioration develop. The infant presented herein had adequate renal function and no evidence of pulmonary hypoplasia after delivery.

Comment

The patient in this case report presented for genetic counseling owing to advanced maternal age; however, almost 80% of birth defects are due to causes other than chromosome abnormalities.¹ Pedigree analysis and early fetal evaluation with sophisticated ultrasound identified other unrecognized concerns such as recurrent abortion, anatomic defects frequently due to single-gene (Mendelian) disorders and developmental/multifactorial malformations. This case also illustrates that patients referred for amniocentesis on the basis of advanced age should always be offered complete genetic counseling, with discussion about other causes for congenital malformations. ★★

Dr. Bombard: Keesler AFB, MS (39534-5300)

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Acute Carbon Monoxide Poisoning: Emergency Management and Hyperbaric Oxygen Therapy

HARRY W. SEVERANCE, M.D.

J. C. KOLB, M.D.

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ROBERT C. JORDEN, M.D.

Jackson, Mississippi

DURING THE PERIOD of February 6-7, 1989, central Mississippi was among the areas suffering a crippling ice storm that interrupted electrical power to large segments of the population for periods up to one week. Many families and homes were inadequately prepared for alternative home heating and some resorted to open, unventilated fires in their homes. During the period from February 7-9, the University of Mississippi Medical Center (UMC) treated sixteen cases of carbon monoxide (CO) poisoning secondary to unventilated home fires or storm-related damage to existing heating systems. Five cases were children with ages ranging from 11 months to 11 years. Eleven cases were in adults from 17 to 75 years old. Six of these cases resulted in hyperbaric oxygen (HBO) therapy; these cases are briefly reviewed.

Report of Cases

Case 1: A 29-year-old female was using an unventilated charcoal grill inside her home for heating and cooking. The grill had been lit since the previous evening. The patient was found by family members unconscious and unresponsive. On arrival of paramedics, the patient was unresponsive and had the following vital signs (VS): P 116, BP 100/38, respirations (R) 12. Her airway was patent, though it was observed that she had vomited at least once. Smoke fumes were present in the house. The patient was placed on 100% oxygen (O₂) via non-rebreather mask (NRM) and transported to UMC.

From the Division of Emergency Medicine and the Hyperbaric Medicine Service, University Medical Center, Jackson, MS.

An ice storm in February 1989 resulted in numerous incidences of carbon monoxide poisoning in central Mississippi secondary to exposure to open fires in unventilated living spaces. Sixteen cases were treated during this period at the University of Mississippi Medical Center and 6 received Hyperbaric Oxygen therapy. These 6 cases and the mechanisms of CO poisoning are discussed and recommendations for emergency management are reviewed.

After approximately 10 minutes on O₂ the patient became responsive to verbal stimuli but remained lethargic, even after arrival to the hospital. Physical examination was unremarkable and there were no focal neurologic deficits. Initial arterial blood sampling on 100% O₂ demonstrated a pH of 7.50, a pCO₂ of 27, a pO₂ of 316, and a carboxyhemoglobin (COHb) level of 22.2%. Because of lethargy after smoke inhalation the patient received a single HBO treatment of 2.4 atmospheres absolute (ATA) for 90 minutes. She tolerated this well and was entirely alert before the end of the procedure. She was eventually discharged from the emergency department after observation.

Case 2: A 75-year-old female was using an unventilated charcoal grill to keep warm and cook. The patient became dizzy and complained of loss of vision as reported by family members who transported her to UMC. On arrival her VS were: P 88,

BP 110/70, and R 20. Physical examination including the neurologic examination was unremarkable. Initial room air arterial blood gases were: pH 7.40, pCO₂ 37, pO₂ 60, and COHb 37.0%. Because of her smoke inhalation, age and past medical history which included diabetes and cardiac disease, HBO therapy was attempted. However, the patient was not able to tolerate the treatment as she could not equalize middle ear pressure and became claustrophobic. Therefore she was observed on 100% O₂ NRM with serial arterial COHb monitoring. After 8 hours her COHb level had dropped to 5.4%. She developed no complications during observation and was eventually discharged home.

Case 3: A 55-year-old female relative present in the same house as case 2 was transported to UMC after discovery of CO poisoning in her relative. The patient was awake and responsive at home but complained of dizziness and headache and one near-syncope episode. Arterial sampling on 100% O₂ demonstrated a pH of 7.37, a pCO₂ of 40, a pO₂ of 467, and a COHb level of 26.4%. Because of her symptoms and history of smoke inhalation she received one treatment of HBO at 2.4 ATA for 90 minutes. Her symptoms resolved during treatment and after observation she was discharged home.

Case 4: An 18-year-old female was brought to UMC by her boyfriend who reported finding her lethargic at home. Other family members were too weak to come to the hospital. All had complaints of dizziness, headache, vomiting and increasing lethargy. This patient denied any exposure to a source of combustion in the house. Later it was discovered that the house had central gas heating that had sustained ice-storm related damage. The patient was arousable but very lethargic, with an otherwise normal physical and neurologic examination. Her vital signs were normal. Because of a history of symptoms affecting several patients simultaneously CO poisoning was suspected and arterial blood gases obtained. Room air arterial blood gases showed the following: pH 7.37, pCO₂ 36, pO₂ 117, and COHb 30.5%. The patient was immediately placed on 100% O₂ via NRM. Because of her elevated COHb level with symptoms, she received one HBO treatment at 2.4 ATA for 90 minutes with complete resolution of symptoms. After observation she was discharged home.

Case 5: The 50-year-old mother of the above patient (case 4) was brought to UMC after discovery of CO poisoning in the daughter. The mother's complaints and physical examination were similar to those of her daughter except she was less lethargic. Arterial sampling done while 100% O₂ was being

established returned as follows: pH 7.35, pCO₂ 42, pO₂ 56, COHb 29.2%. Because of her COHb level and presence of symptoms she was treated with one HBO treatment at 2.4 ATA for 90 minutes. Her symptoms resolved and after observation she was discharged home.

Case 6: A 17-year-old male in the same house as cases 4 and 5 was brought to UMC concurrently with patient 5. The patient was found lying in bed at home arousable but complaining of weakness and dizziness. Physical and neurologic examinations were unremarkable and arterial sampling on 100% O₂ via NRM were: pH 7.40, pCO₂ 40, pO₂ 417, COHb 27.8%. Because of his symptoms and COHb level he was given one HBO treatment at 2.4 ATA for 90 minutes with resolution of his symptoms. After observation he was discharged home.

Discussion

Pathophysiology: Poisoning from CO occurs from the inhalation of the products of incomplete combustion of carbonaceous compounds. The usual sources are automobile exhaust, gas or kerosene heaters and stoves and open, unventilated fires in closed spaces.¹ CO binds to the hemoglobin molecule with an affinity 230-270 times greater than that of oxygen and forms COHb which can be expressed as a percentage of hemoglobin saturation.² CO poisoning is the direct cause or a contributing factor in 80% of fatalities occurring within 12 hours of injury in fire victims.³ In 30% it is the sole factor in their failure to escape. The pathophysiology of CO poisoning is not entirely elucidated but may involve at least four different mechanisms. Competitive displacement by CO of O₂ off the Hb binding sites leads to impaired O₂ transport and tissue hypoxia.^{1,2} Tighter binding of remaining Hb bound O₂ results in a shift of the oxygen hemoglobin dissociation curve to the left with resultant decreased O₂ unloading at the tissues and further hypoxia.^{1,2,4} Cardiac output is decreased as tissue oxygen perfusion decreases and also possibly as CO binds to cardiac myoglobin further decreasing O₂ perfusion of cardiac muscle.⁵ CO also binds to the cytochrome chain, primarily cytochromes A₃ and P 450 with possible poisoning of cytochrome function. It is at this micro-cellular level where many damaging effects of CO poisoning are postulated to occur.^{1,4}

Clinical Presentation: Clinically, CO poisoning can present non-specifically with a multitude of symptoms that often roughly equate with arterial COHb levels. Complaints suggestive of mild CO poisoning, such as headache and irritability may appear with levels as low as 5-10%. Between 10-

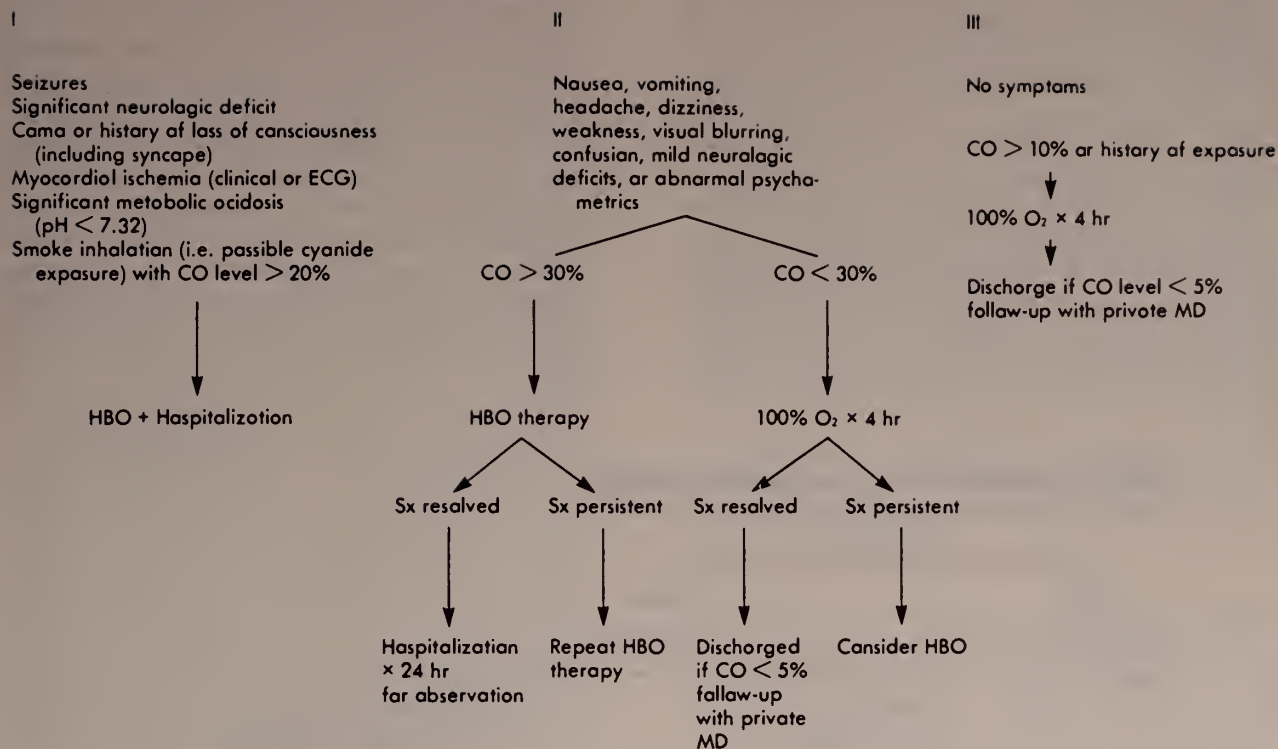


Figure 1. Reproduced by permission from Emergency Medicine: Concepts and Clinical Practice, C.V. Mosby Co., 1988.

20% one may see worsening headache, errors in judgement, nausea and vomiting, dizziness and tachycardia. Between 20-40%, increasing lethargy and alterations in mentation can occur. At levels greater than 40%, severe symptoms such as cardiac dysrhythmias, angina, seizures, coma and death can be encountered. Other factors can influence presenting symptoms. These include the patient's age and physical health, length of exposure and time since exposure and activity level during exposure. Also, the source of the exposure can affect symptoms; for example, victims of smoke inhalation are more symptomatic at lower COHb levels. This may be due to the presence of other toxins, such as cyanide. Cutaneous manifestations which may be seen at any COHb level include an erythema-like rash, edema, blisters and bullae.⁶ The classic "cherry-red" skin is usually only seen in terminal cases.

Complications of CO poisoning include: cardiac dysrhythmias, myocardial ischemia, metabolic acidosis, pulmonary edema and/or hemorrhage, rhabdomyolysis and renal failure, neuropsychiatric changes such as alterations in mentation, gait, skill performance, and mood. Pulmonary and renal com-

plications may not be recognized until hours after the initial insult. Neuropsychiatric complication may begin days to weeks after the acute event.^{7,8} Laboratory tests are of some help in evaluation of CO poisoning. The hallmark finding is an elevated arterial COHb level, though the level may not always be compatible with the patient's symptoms. ABG's may appear normal as many, or nearly all, facilities measure O₂ dissolved in plasma, not hemoglobin-bound oxygen. Also, if oxygen saturation is computed rather than measured, a falsely normal value will be reported despite a significant CO poisoning. There is often an anion gap acidosis present in these patients due to lactic acidemia from tissue hypoxia. Creatine phosphokinase (CK) can be elevated, especially the MB and MM bands. Free hemoglobin and myoglobin may be noted in the urine and may equate with decreasing renal function. Ischemic changes may appear on ECG and dysrhythmias may be seen on cardiac monitors. Serial chest radiographs may demonstrate evolving changes of pulmonary edema, especially in cases of smoke inhalation.

Treatment: All patients should be immediately

removed from the source of CO poisoning and have 100% oxygen administered. It is important to remember that CO is competitively bound to Hb. The half-life for displacement of CO from Hb at 21% FIO₂ is 4-5 hours. With 100% O₂ the time is reduced to 90 minutes and at 2.4 — 3.0 ATA the time is reduced to 20-30 minutes. The administration of oxygen not only reduces the bound half-life of COHb, but shortens the acute symptoms of CO intoxication. Therefore, all patients should be treated with at least 100% oxygen until all acute symptoms resolve. Upon arrival at the emergency department airway, breathing and circulation should be reassessed and stabilized. Other injuries such as trauma

or burns should be ruled out during a quick primary survey. During initial stabilization all patients should have ABG's with an arterial COHb level. If the COHb level is significantly elevated, the following additional tests should be obtained: CBC, electrolyte screen, serum CK level with isoenzymes and urine hemoglobin and myoglobin determinations. These patients should receive continuous cardiac monitoring upon arrival and a baseline ECG as well as initial and follow-up chest radiographs. After initial stabilization and interventions are completed a thorough secondary survey including a careful baseline neurologic examination should be conducted.

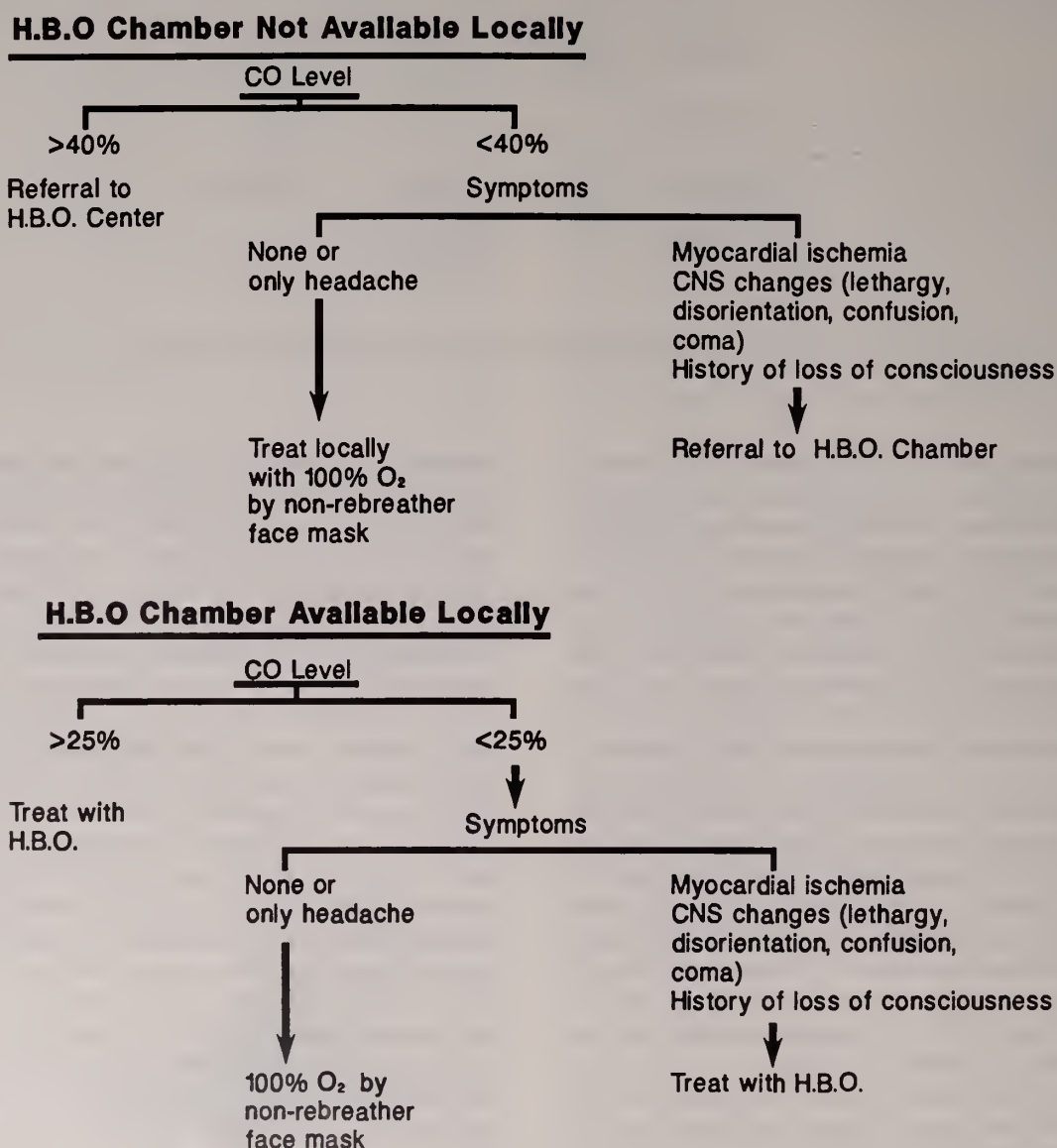


Figure 2.

In determining the severity of CO poisoning one must consider both the COHb level and the patient's presentation. As noted previously, all patients should remain on 100% O₂ until all symptoms resolve. Many authors suggest maintenance of 100% O₂ until COHb levels fall below 5%.⁹ CO poisonings are often divided into mild, moderate and severe based on COHb levels and symptoms that are generally seen at that level of intoxication (see Figure 1). However, individual patients may vary. Evaluation is made more difficult by the fact that the onset of pulmonary and neuropsychiatric complications can be significantly delayed. It is therefore often difficult to determine which patients should receive HBO therapy. The issue is further complicated by the fact that although HBO most rapidly reduces the acute effects of CO poisoning, there are no clinically controlled studies proving the efficacy of HBO over 100% O₂ in prevention of neurologic sequelae, though this has been suggested in case reports.⁹ Also to be considered are the relative scarcity of HBO chambers. Many patients resolve their acute symptoms while waiting for or during transport to an HBO center. The relative risk of treating a CO poisoned patient locally with 100% oxygen versus transporting such a patient to an HBO center continues to be debated.

There are several different algorithms that outline treatment for CO poisoning. Recommendations by the Undersea and Hyperbaric Medical Society are as follows:⁹ (1) Patients with CO levels of 40% or greater should be treated in the nearest available HBO facility; (2) Patients with a 25% CO level or greater should receive HBO treatments if a chamber is locally available but otherwise can be treated with 100% O₂; (3) Patients with signs of severe intoxication should receive HBO treatment regardless of their COHb levels. An alternative algorithm that outlines treatment guidelines based on clinical and laboratory findings is seen in Figure 1. However, this algorithm does not directly address the question of patient transport. An algorithm in Figure 2 has been constructed from the guidelines above and from material by Kindwall,¹⁰ to outline treatment guidelines based both on patient findings and HBO chamber availability.

Disposition. All patients with CO exposure should be treated with at least 100% oxygen and observed for a minimum of 4 hours. If they remain asymptomatic and the CO level falls below 5% they may be discharged from the emergency department for follow-up with their regular physician.

Patients with mild to moderate symptoms and/or elevated COHb levels should be treated with at least

100% oxygen and at a minimum, be observed until symptoms have resolved, no acute complications evolve and COHb levels fall below 5%. HBO treatment may be considered based on one of the suggested treatment algorithms including consideration of relative availability of an HBO chamber. Any patient who fails to improve after 4 hours on 100% oxygen or worsens at any time should be hospitalized and HBO therapy begun if regionally available.

Patients with severe symptoms should receive acute stabilization including 100% oxygen and rapid HBO therapy with hospitalization at a hyperbaric center. However, no patient should be transferred to an HBO center without first conferring with the receiving physician and agreeing on requirements for and method of transport. All patients exposed to CO poisoning need follow up neurologic examinations to evaluate for late neuropsychiatric complications.

Summary

CO poisoning occurs when patients are exposed to the products of incomplete combustion of carbonaceous materials. Multiple such cases occurred during a short period in Central Mississippi and many of these cases were treated at one area hospital where an HBO facility exists. Six patients met at least one or more criteria for HBO therapy and received treatments. Guidelines for the emergency management of CO poisonings have been outlined and alternative recommendations for HBO treatment selection have been given. ★★★

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Evaluation and Management of Urinary Incontinence

G. RODNEY MEEKS, M.D., Moderator
Jackson, Mississippi

DR. MEEKS: R.W. is a 29-year-old black woman, gravida 5, para 5, who presents with a chief complaint of "losing urine." How common is incontinence?

DR. JOHNSON: Approximately 15% of the general population has significant incontinence. This may increase to 40% of hospitalized patients and to over 50% of institutionalized patients.

DR. BONDURANT: Of course, incontinence is one of the major factors in deciding to institutionalize someone. Families become very frustrated once a family member begins to lose urine.

DR. MEEKS: She gave a history of incontinence which developed following the birth of her last child. Over the past six months, the loss of urine had become worse. It occurred almost exclusively with coughing, sneezing, or laughing. What should be included in a differential diagnosis.

DR. JONES: Incontinence may be classified as transient or established (common causes of transient incontinence are found in Table 1). Most recent onset incontinence has an acute cause and can be ameliorated. Established incontinence often is on the basis of a longstanding condition.

DR. BONDURANT: The first diagnosis of which I think is genuine stress incontinence. It is associated with loss of pelvic support but intrinsic bladder function is normal. The second is urge incontinence or detrusor dyssynergia which is associated with spastic or hyperactive bladder function. The third is overflow incontinence which is associated with atonic bladder function. Hydrostatic pressure in the overdistended bladder results in frequent loss of small

Panelists: Sidney W. Bondurant, M.D. of Grenada, Noel H. Johnson, M.D. of Biloxi, and Virginia A. Jones, M.D. of Jackson.

amounts of urine. The fourth is fistulae which most commonly follows hysterectomy. Urge incontinence, overflow incontinence, and fistulae most often have normal pelvic support. Lastly, incontinence may have multiple etiologies. All possible causes must be identified to make rational management choices.

DR. JONES: Cystitis produces intense bladder spasm. Incontinence may improve after treating the infection with antibiotics. Diabetes often causes intrinsic bladder dysfunction.

DR. JOHNSON: Regardless of the etiology, I define the severity of incontinence. Does it occur throughout the day? Is she incontinent at night or at rest? Does it occur with valsalva or stress? Does a sense of urge occur before the urine loss? What volume of urine is lost? What is the frequency of urine loss? Must she wear a pad? Lastly, I want to know how it limits her activities.

DR. MEEKS: What diagnosis is most likely?

DR. JONES: The history is typical of genuine stress urinary incontinence. She only loses urine with stress such as coughing, exercise, and laughing. She does not complain of constant dribbling, dribbling after urination, or losing urine at night. She has no sense of urgency. If a woman loses more than a small spurt of urine then she probably does not have typical stress incontinence.

DR. MEEKS: What other history may be consistent with stress incontinence?

DR. JOHNSON: Most women will have delivered

vaginally and often have a history of large infants or vaginal trauma. Sometimes the patient will complain of pelvic pressure, actual protrusion of the vaginal wall, or the need to splint the vagina during defecation.

DR. MEEKS: The largest of her five children weighed 9 pounds and 14 ounces. She recalled having to have a "lot of stitches" following the delivery of her first child. She had no difficulty with bowel movements and did not have to splint the vagina to defecate. She never lost urine at night. She needs a pad if she has an upper respiratory infection or cough. What are the important aspects of the physical examination?

TABLE 1
CAUSES OF TRANSIENT INCONTINENCE

Delirium
Infection
Genitourinary Atrophy
Psychological Disorder
Endocrinopathy
Restricted Mobility
Stool Impaction
Adrenergic Agonist/Antagonist

TABLE 2
DRUGS WHICH INHIBIT VOIDING

By increasing urethral pressure (α -adrenergics)
ephedrine
imipramine (Tofranil)
phenylpropanolamine (Ornade)
clonidine (Catapres)
By relaxing the bladder
atropine, hyoscyamine (Urised)
flavoxate hydrochloride (Urispas)
oxybutynin (Ditropan)
propantheline (Pro-banthine)

TABLE 3
DRUGS WHICH PROMOTE VOIDING

By reducing urethral pressure
methyldopa (Aldomet)
phenoxybenzamine (Dibenzyline)
By contracting the bladder
bethecol (Urecholine)
neostigmine (Prostigmin)

DR. BONDURANT: The pelvic exam is most important. Usually one can demonstrate pelvic relaxation, manifest by descent of the uterus, cystocele, rectocele, and loss of urethrovesical angle.

DR. MEEKS: Her weight was 147 pounds and height was 66 inches. Blood pressure was 130/90. The abdomen showed well-healed scars from an umbilical hernia repair, tubal ligation, and appendectomy. The vulva was normal. The introitus was somewhat gaping. A second-degree cystocele and marked loss of urethrovesical angle were present. A third-degree rectocele was demonstrated. With valsalva she had prolapse of the cervix, which was free of lesions. The uterus was normal size and mobile. Adnexa was negative. There was good rectal sphincter tone. The remainder of the physical exam was entirely normal. How do you assure yourself that the patient has normal intrinsic bladder function?

DR. JONES: Neurologic problems, such as multiple sclerosis, cord injury, or peripheral neuropathy may result in an atonic bladder. Many medications alter bladder tone. A basic neurologic exam including patellar reflexes and sensations of the perianal skin and feet will evaluate long peripheral nerves. The bulbocavernosus reflex, which causes an "anal wink," tests the sacral reflex arcs. Normal neurologic exam normally eliminates hypotonic bladder function.

DR. MEEKS: How does one recognize urge incontinence?

DR. JOHNSON: Most commonly the patient will describe a sense of needing to void which is uncontrollable. Once she begins to lose urine she may empty the entire bladder volume or at least a large portion. She may experience frequency but only pass small volumes of urine. Classically, heel bounces will evoke a sense of urgency or actual loss of urine.

DR. MEEKS: What is the best way to determine if a fistulae is present?

DR. BONDURANT: A simple test can be performed by placing a tampon into the vagina and having the patient take a Urised tablet which colors the urine. A fistula is diagnosed if the tampon is stained with blue dye an hour or two later. Occasionally, this technique will not demonstrate a small fistulae. In cases where one remains suspicious, IVP and cystoscopy are warranted.

DR. JONES: An IVP can also exclude ectopic ureter and some anatomical problems.

DR. MEEKS: Do postmenopausal women have a more severe problem with incontinence?

DR. JONES: From an embryologic standpoint, the

bladder comes from the same tissue as the vagina. Therefore, the bladder mimics the atrophic changes that one sees in the vagina. The suppleness of the tissues is lost and bladder compliance is reduced. The urethra becomes a somewhat rigid open tube, that allows incontinence to occur more easily. Estrogen therapy will sometimes relieve symptoms by correcting atrophic changes.

DR. MEEKS: Do you perform volumetrics or cystometrics in the office?

DR. JOHNSON: Yes, special equipment is not necessary. Have the patient void and record the volume. Insert a catheter, drain the bladder, and determine the residual volume. Normal residual is less than 30 cc. Fill the bladder and determine at what volume she notices the urge to void. Normal capacity is 250-300 cc. If an uncontrollable urge to void occurs at less than 150 cc, she very likely has urge incontinence. Remove the catheter, have her Valsalva and determine if leakage occurs.

DR. JONES: I have her stand and cough if incontinence is not demonstrated in the lithotomy position. If incontinence is demonstrated, elevate the urethrovesical angle. If the incontinence is controlled she may be a candidate for surgical correction. Be careful not to completely occlude the urethra, which will block urine flow.

DR. BONDURANT: One may evaluate the urethrovesical angle by placing a Q-tip in the urethra, and observing the angle it makes in relation to horizontal. If, when she bears down, the angle moves upward, the patient has loss of angle.

DR. MEEKS: Volumetrics were performed. She voided 200 cc and had a residual urine of 5 cc. The bladder was filled. Initial urge to void occurred at 200 cc and an uncomfortable urge at 250 cc. While the patient was standing erect a spurt of urine was lost with each Valsalva maneuver. With elevation of the urethrovesical angle, the patient's incontinence resolved. How would you manage this patient now?

DR. JOHNSON: Genuine stress urinary incontinence requires surgery.

DR. JONES: I utilize the Kegal exercises to improve pelvic support, especially when incontinence is not severe. Some women do not void frequently enough. Merely keeping the bladder empty may improve symptoms. Whether you proceed with surgery depends on the patient. How much discomfort this is causing her or how much it is interfering with her lifestyle. I agree that she is a surgical candidate.

DR. BONDURANT: I would recommend a vaginal hysterectomy with an anterior and posterior colporrhaphy. Some surgeons might recommend an

abdominal hysterectomy and retropubic urethropexy such as a Marshall-Marchetti-Krantz procedure.

DR. JOHNSON: When there is loss of urethrovesical angle and significant cystocele, the vaginal approach is appropriate.

DR. MEEKS: She had a vaginal hysterectomy and an anterior and posterior colporrhaphy. She was doing well at six weeks postoperatively. The patient is now five years from surgery. She has normal bowel and bladder function and is having absolutely no incontinence.

DR. MEEKS: What type of postoperative bladder care do you recommend?

DR. JOHNSON: I use Foley catheter drainage for 4 to 5 days. On the fourth day the catheter is alternately clamped for two hours and then released for two hours to re-train the bladder. The catheter is removed the next day. Most patients are able to void without difficulty. After they have voided once or twice, I check a residual urine. If the residual exceeds the voided volume, I reinsert the catheter.

DR. MEEKS: What are advantages to suprapubic drainage?

DR. JONES: Cystitis may be less likely. Also, the patient may be able to void spontaneously since the urethra is not blocked. If one measures residual urine, re-catheterization is not necessary.

DR. MEEKS: What recommendations do you make in terms of resuming work and resuming intercourse?

DR. JOHNSON: I recommend that she not have intercourse for at least 6 weeks.

DR. JONES: In regards to work, it depends on what she does. If she has a sedentary job, she might go back to work after 3-4 weeks. If her work requires straining or lifting, I recommend that she miss a minimum of 6 weeks. If she does heavy physical labor, I recommend up to 8 weeks away from work.

DR. MEEKS: When you perform an anterior repair do you always perform a posterior repair?

DR. JONES: Yes. Usually there is some degree of relaxation in the posterior vault. Repair is required to support the anterior vaginal wall.

DR. BONDURANT: I always do both. Very rarely does one see an isolated pelvic floor defect.

DR. MEEKS: What success rate can one expect?

DR. BONDURANT: A 90% success rate in primary repairs is felt to be normal. It is not nearly that good for a repeat operation. If you do just a repair without hysterectomy, the percentage of failure is going to be higher. I have seen series in which the failure rate was up to 50% in these patients.

DR. JOHNSON: If the patient is obese the chance of a successful or long-lasting repair is decreased. Weight loss will help.

DR. BONDURANT: Repetitive stress on the bladder neck from coughing is also an added factor, especially in patients who smoke or have chronic pulmonary disease. Failures are more common in this group.

DR. MEEKS: Does pharmacological manipulation have any place in management of stress incontinence?

DR. JONES: Pharmacologic manipulation is one arm of therapy in very selective patients. Alpha-adrenergic agents may increase urethral pressure, thereby reducing the degree of incontinence.

DR. JOHNSON: Medications have very little place, particularly in a woman like this, who has anatomic causes. More success may be expected in a hypotonic bladder but such high doses of medication are required that the patients are often symptomatic (common agents which alter bladder function are found in Tables 2 and 3).

DR. MEEKS: Do complicated cases require urodynamics?

DR. BONDURANT: Definitely. One must evaluate every aspect of incontinence before deciding on any

plan of therapy. This is especially critical in women with an atypical history or women in which a repair has failed.

DR. MEEKS: Urodynamics formally measures urinary volume, abdominal, vesicle and urethral pressure, and detrusor activity simultaneously. These are correlated with x-ray cystograms and voiding cystourethrograms. The special equipment necessary for urodynamics is currently available on a limited basis and often patients are referred to a tertiary center for evaluation. (Urodynamics consultation is available at the University Medical Center.)

I would like to thank our panelists for participating in grand rounds. It takes time from your busy practices. We appreciate your attendance very much. ★★★

Dr. Meeks, 2500 North State Street (35216)

Acknowledgement

Dr. Charles Head, Dr. Linwood Shannon and Dr. Chester Lake also participated in a panel discussion regarding urinary incontinence. Dr. Lake died on April 3, 1987. This paper is dedicated to him.

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Are Your Taxes Done? Not by a Long Shot!

TIM LAWRENCE

Jackson, Mississippi

YOU COULD almost hear the country heave a collective sigh of relief at midnight April 17. That was the official end of the tax season this year.

For many it signaled the start of a nine-month vacation from worrying about Uncle Sam's hand in their pocket. But for the financially prudent, it meant time to review ways to reduce the tax bite on this year's income.

According to the experts, everything you need to know about minimizing your taxes falls into two categories: maximize your deductions and minimize your taxable income. After that, it gets tricky, but we can break it down into some basic guidelines.

Accelerate or Defer Income and Deductions

In making a decision, you will not only need to project your income and deductions for 1989, but for 1990 too. You may wish to defer income and accelerate deductions if you feel that your 1989 income will be greater than what you think you'll earn in 1990. On the other hand, if you feel that your 1990 income will be greater than what you expect to earn in 1989, you should consider accelerating income and deferring deductions. These strategies may be used to reduce or avoid the impact of having your income taxed at a higher tax bracket.

Take Advantage of All Deductions

The number of deductions available to taxpayers has been seriously reduced by the Tax Reform Act of 1986, making those that remain all the more valuable.

The author is associated with Shearson Lehman Hutton of Jackson, MS.

Let's look at medical expenses, for example. If you itemize deductions, only the amount that exceeds 7.5% of your adjusted gross income will be deductible. That means if your adjusted gross income is \$50,000 your medical expenses over \$3,750 would be deductible. If you anticipate incurring significant expenses next year, you may want to postpone elective medical care you planned for 1989 until 1990. Grouping these expenses together will give you a greater chance of being able to benefit from this deduction.

Interest paid on loans is another area you should look at. This year, just 20% of consumer interest (such as credit card or personal loan interest) is deductible; next year that will drop to 10%, and will be eliminated in 1991. Since, in most cases, interest on home loans remains 100% deductible, you should consider applying for a home equity loan to pay off your other loans and consolidate your debt. If your loan does not exceed \$100,000 this will allow you to convert consumer interest that is mostly non-deductible to interest that is fully deductible.

Don't forget about your IRA. If you're still eligible for an Individual Retirement Account deduction, your contribution will lower your taxable income. If you're not, income earned on your contribution will not be subject to current taxation until the earlier of 70½ or until you withdraw from your account. And you gain again if you contribute to your IRA early in the year; the power of compounding interest on interest could add more dollars to your retirement pot. Self-employed individuals should also consider establishing or making contributions to a Keogh account.

Minimize Taxes on Your Investments

With proper planning, you can benefit from certain deductions and losses. Currently, you may only deduct up to \$3,000 (\$1,500 if you are married and are filing separately) in capital losses in a given year. These losses may only be offset by capital gains — excess capital losses are carried over to subsequent tax years. If you anticipate generating excess capital losses during the year, selling securities with already existing gains will allow you to currently benefit from these losses.

Medicare recipients and people over 65 should also be aware of the new tax imposed by the Medicare Catastrophic Coverage Act. This year indi-

viduals eligible for Part A Medicare coverage will have to pay a tax surcharge of \$22.50 for every \$150 of tax liability to the maximum of \$800. The maximum premium goes up by \$50 every year until 1993 when it stabilizes at \$1,050. Thus, if you reduce your federal tax liability, you will reduce the surcharge.

So if you were thinking about taking a mental vacation from income taxes, think again. Some planning now could save you headaches and dollars in April 1990. Before implementing any of these strategies, be sure to consult your tax advisor.

★★★

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THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

Indigent Care — Social, Ethical and Moral Issues — And the Right Thing to Do

IT HAS BEEN said that some half a million Mississippians have no third-party coverage for health care. What is not known is how many of this half million need health care and can't get it. There have been no solid data or studies, to my knowledge, about the presence or extent of an access to health care problem among these citizens. My perception is, however, that there is a very real need and a significant problem for these individuals when health needs arise. I also have the perception that for chronic illnesses in these individuals, there is no care at all.

It has become fashionable these days to address the problem of indigent care in this country. Innumerable conferences and task forces deal with this issue and its solutions. Many programs have been instituted, legislatively and privately, to address the issue. We hope these efforts will continue. Perhaps, eventually, the momentum will be such that there will be significant solutions to the issue. However, at this point in time the solutions are not yet clear.

It is interesting to me that proposed solutions are seldom, if ever, participated in or instituted by the physician population. In my own naive way, I am struck by the idea that medical care problems should be addressed and solutions sought and instituted by the medical community. When I pose this question to physicians in medical groups, I am met with a variety of replies. A typical first response is, "We have always taken care of these people anyway." Although I have no solid data, my perception is that this is not true at all and that we, as a medical community, have not "taken care of these people." Often these physicians will tell me about the large amount of money that they "write off" or "give away" each year. It turns out that these are bad debts, not care that is rendered with a philosophy of not charging and with compassion and caring.

Another response physicians give me is the explanation that since the government has assumed such an active role in taking care of various groups of people, they no longer feel an obligation to offer any kind of free care to anyone. That answer, of course, is a cop-out, because many of the patients we are talking about are those with no coverage and are not included in any federal reimbursement programs, or if they are, their incomes are below the federal poverty income level.

(Continued on page 335)

Gray Heads

I was called to see one of my patients the other night at the emergency room of one of the local hospitals at 3:30 a.m. Dr. Ben Banahan was in charge of the emergency room and was taking good care of my patient. The last time I had seen Ben was some twenty plus years ago when he was tall, thin, black haired . . . a handsome fellow, indeed. Seeing him made me realize that many of us are getting older, whether we like it or not. I'm certain that getting older, grayer — and for some of us — balder, must have its advantages. I am hesitant, however, to agree with Bob Hope that bald heads are solar panels for sex enthusiasts. I do think that being older has its distinct advantages . . . and its responsibilities. Surely we are able to put our years and years of experience to work for us; are more confident in our abilities to do what we do; and even our judgment is better . . . if we'll just take the time to pay attention to it. All things considered, I think we develop a certain amount of relaxation when facing our everyday problems. We enjoy the relationships with patients that years of caring has cemented with them.

The other day I took my third board re-certification examination in family practice. It was an impressive sight to see some eight hundred doctors (at this site alone) all sitting side by side eager to improve themselves educationally. It was at this time that I noticed (and acutally counted) only eighteen of us "Ole Gray Heads" taking the exam, out of the whole bunch. Two thoughts crossed my mind: One, that I must be out of place; and two, the pleasure at seeing so many young people eager to prove to the world that they have what it takes to be a

good doctor. Surely we must have a great profession and one that is to be carried on by bright young people like we once were . . . and continue to try to be.

Thank God I'm a physician in this medical world of gray heads . . . and those not so gray.

JOE JOHNSTON, M.D.
Associate Editor

THE PRESIDENT'S PAGE

(Continued from page 334)

Finally, some physicians will present me with the fact that office overhead and expenses for the meager reimbursements they get from federally funded patients is a strain already, and if they add to this the burden of caring for those with no coverage free of charge, financial disaster would be the result. I am quite sympathetic to those problems. However, economists tell me that physicians' incomes remain in the top ten percent of all income-producing professions in the United States, and this has been unwaveringly true for about the last forty years.

For those physicians with the majority of their patient population as public patients (that is Medicare and Medicaid), the argument that overhead expenses are difficult to take care of because of the poor reimbursement rate is quite true. This particular group of doctors must hire extra personnel just to comply with regulations and manage the paper trail involved with caring for public patients. I also hear the argument from these physicians (and from others who want an excuse for not seeing the indigent) that the negative image that this "type of person" creates in their reception area is not conducive to the retention of private paying patients.

PRESIDENT'S PAGE/Continued

I don't doubt that there is truth in all of these reasons, but all of these answers seem to skirt and bypass the predominant and real issue.

That issue is the question "Do we, as physicians, have a social, moral or ethical obligation and responsibility to take care of the medical problems of the indigent?" The moral and ethical aspects of this question are such that it cannot be answered in a definitive way, pro or con. It is an individual philosophical question. However, the individual physician's answer to the moral and ethical question has great bearing on the social aspects of the issue.

If the entire question is left as a social issue to be addressed by politicians and economists with minimal physician input, then I think the solution will be one that will not be looked on with favor or acceptance by the physician population. If we, as physicians, do not accept the responsibility of solving this great social issue, then I think we will see society force upon us their own solutions. These solutions will be mandatory assignment and other restrictions tied to licensure, limitations on our freedom to practice medicine, and measures that make it more difficult for us to carry on our profession.

My personal belief is that this is definitely a moral and ethical responsibility for physicians. I think we should take the lead in suggesting and implementing solutions to the matter of caring for the indigent.

Your medical association has become very interested in a three-pronged approach.

First, we want to cooperate and work fervently with the Medicaid Commission on a system of managed care for the indigent that will include beneficiary education to access the system appropriately and when necessary. We want to cooperate in every possible way with Medicaid to encourage physicians throughout the state to accept Medicaid patients as much as they can. We have even advocated and received good response to an idea of a "fair share" concept for physicians in accepting Medicaid. If we had a case manager system in operation and we knew exactly what the Medicaid population is in a service area, then we could, with the cooperation of the specialties other than primary care, divide the work among them so that no one would be overburdened with the problems posed by the public patient.

Secondly, to address the issue of acute care for the indigent, we will soon be proposing to the association a statewide plan for referring these patients for appropriate acute care by having physicians volunteer their services on a free basis.

The final aspect of our three-pronged approach is to work with the Public Health Department in establishing volunteer clinics for the chronically ill who have no coverage.

So I plead with you to do your fair share individually, to meet our social responsibility to these patients.

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COMMENT

TO THE EDITORS:

I read with interest the article appearing in the September issue of the *Journal* dealing with Hospital Emergency Departments in Mississippi by Drs. Michael H. Bross and Frank M. Wiygul.

As Medical Director of Emergency Medical Services in Mississippi for the past fifteen years, I must say that I feel these gentlemen did an outstanding job in evaluating Emergency Departments within our state. They dealt with an issue I have commented on numerous times, this being that the State of Mississippi needs to spend a great deal of time and effort in categorizing and evaluating its emergency departments. There is no doubt that a number of patients are taken to emergency facilities which are ill-equipped to handle the magnitude of emergency cases they receive. However, until physicians continue to put pressure on hospitals to allow the

State Department of Health, specifically the Division of Emergency Medical Services, to evaluate and regulate from an overall state program, then we will continue to have patients cared for in emergency facilities which are ill-equipped to care for the type patients who present to those facilities.

I do hope that all physicians reading the article can realize that a number of trauma cases can be triaged and sent on to better-equipped facilities. It would also behoove each of us to see that the institutions to which they are taken for treatment will be compensated for care provided.

The Department of Emergency Medical Services in Mississippi will continue to press toward these goals. We solicit the support of all physicians within the state in our endeavors.

Sincerely,
W. BRIGGS HOPSON, JR., M.D., F.A.C.S.
Medical Director
Emergency Medical Services
State of Mississippi



Doctor,

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For information about AMA-ERF greeting cards for year-round use, contact a member of your local MSMA Auxiliary, or Karen Stephens, 1105 Oakleigh Dr., Hattiesburg, MS 39401; telephone 264-0154.

MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 24-28, 1990, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 122nd Annual Session, May 30-June 3, 1990, Jackson. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, July 25-28, 1990, Gulf Shores, AL. Leontine Stevens, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. H. S. Barrett, Secy., P.O. Box 1810, Gulfport 39501. Counties: Hancock, Harrison, Stone.

Delta Medical Society, 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSota County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Emrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Granada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. David H. Irwin, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. D. Winn Walcott, Secy., 2173 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Jack Hollister, Secy., P.O. Box 9000, Columbus 39705. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. John J. McClosky, Secy., 3003 Short Cut Rd., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society, 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Wayne M. Pitre, Secy., 1202 Mission Park Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials of the Accreditation Council for Continuing Medical Education (ACCME)" and the Council on Medical Education of the MSMA. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

Council on Scientific Assembly
Mississippi State Medical Association
735 Riverside Drive
Jackson, MS 39202

North Mississippi Medical Center
830 Gloster Street
Tupelo, MS 38801

Forrest General Hospital
Mamie Street and Highway 49 South
Hattiesburg, MS 39401

Mississippi Baptist Medical Center
1225 N. State Street
Jackson, MS 39202

Gulf Coast Community Hospital
4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Sergeant Prentiss Dr.
Natchez, MS 39120

King's Daughter Hospital
Highway 51 N.
Brookhaven, MS 39601

Charter Hospital of Jackson
Lakeland Drive
Jackson, MS 39208

Biloxi Regional Medical Center
150 Reynoir St.
Biloxi, MS 39533

Jeff Anderson Regional Medical Center
2124 14th St.
Meridian, MS 39301

Mercy Regional Medical Center
100 McAuley Dr.
Vicksburg, MS 39180

Golden Triangle Regional Medical Center
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Columbus, MS 39701

Northwest Mississippi Regional Medical Center
Hospital Dr.
Clarksdale, MS 38614

North Panola County Hospital
1-55 at Highway 315
Sardis, MS 38666

Singing River Hospital
2809 Denny Ave.
Pascagoula, MS 39567

Magnolia Hospital
Alcorn Drive
Corinth, MS 38834

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1401 River Rd.
Greenwood, MS 38930

Gulfport Memorial Hospital
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Gulfport, MS 39501

Oxford-Lafayette County Hospital
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Oxford, MS 38655

St. Dominic-Jackson Memorial Hospital
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MEDICAL ORGANIZATION

Council Announces Plans For 122nd Annual Session

Planning is underway for MSMA's 122nd Annual Session, set for May 30-June 3, 1990 at the Coliseum Ramada Inn in Jackson.

At its August 23 meeting the Council on Scientific Assembly, chaired by Dr. Don Mitchell, developed a program of activities that includes several schedule changes from previous years. The proposed agenda was endorsed by the MSMA Board of Trustees at its recent meeting. The Council on Scientific Assembly, charged with overall planning of the Annual Session, also includes Dr. Howard Freeman, chairman of the Hospital Medical Staff Section; Dr. Michael Maples, chairman of the Young Physicians Section; Dr. James Hughes, chairman of the Surgical Plenary Group; and Dr. John Hassell, chairman, Medical Plenary Group.

Under the new schedule, the Young Physicians Section and the Hospital Medical Staff Section will have a joint meeting on Thursday afternoon, May 31, with a program featuring discussions of current socioeconomic issues affecting medicine. Breakout sessions will follow so that each section may conduct its annual business meeting.

House of Delegates sessions will again be conducted on Thursday and Sunday mornings, as in past years, but reference committee hearings will be held on Thursday and Friday afternoons.

The 1990 Medicine Plenary Session will be held on Friday morning, June 1, and will feature a debate on the issue of cholesterol and updates on immunization, rheumatic fever, and hemoglobinopathy. The Surgery Plenary Session is set for Saturday morning, June 2, and will be held in conjunction with the annual meeting of the Mississippi Chapter, American College of Surgeons. The 1990 Surgery Plenary Session will be a trauma symposium.

The 122nd Annual Session agenda will include the annual meeting of the MSMA Auxiliary, meetings of medical related organizations, and scientific and technical exhibits. Specialty societies will be invited to schedule concurrent meetings during the week.

Plans call for the President's reception to be held on Thursday night, rather than Wednesday as in the past. Medical alumni organizations will host reunions on Friday night, and the annual MSMA/MSMA

Auxiliary membership banquet will be held on Saturday night.

Many special events will be added to the schedule, and more details will be made available in the months to come. MSMA and MSMA Auxiliary members are encouraged to make plans now to attend. The Annual Session was last conducted in Jackson in 1978.

Conference Addresses Issues Affecting Rural Mississippi

Health care in rural Mississippi was one topic under discussion at a three-day conference on revitalizing rural areas. Dr. Ed Hill, MSMA president, and Dr. Richard Field, medical director of the Field Memorial Community Hospital, were among speakers.

The conference, sponsored by the Mississippi Cooperative Extension Service, the Department of Economic and Community Development, and the Southern Rural Development Center, was held in Jackson last month. It brought some 250 participants together to develop legislative remedies for problems facing rural areas.

Dr. Hill, addressing the problem of inadequate supply of physicians in rural areas, noted that students from small towns are more likely to return to practice in a rural area. He also commented that 70 percent of doctors locate within a 50-mile radius of where they completed training, and he urged development of incentives to encourage more students to select rural Mississippi as a practice site.

Dr. Field reported the successful operation of the Field Hospital, particularly in the acquisition and retention of physicians in the rural Centreville area. He also described the hospital's successful efforts to provide services usually associated with larger medical centers.

Charles Shepherd, administrator of H. G. Watkins Hospital in Quitman, discussed specific needs of rural hospitals. He cited national studies indicating that the most vulnerable hospitals are those with fewer than 100 beds, and observed that the majority of members of the Mississippi Hospital Association fall into that critical list. He emphasized the importance of encouraging physicians to move into rural areas, along with hospitals' developing new sources of funding.

In addition to health care issues, the conference also addressed education, highways, housing, and other matters pertaining to economic development and progress.

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BONUS AMOUNTS: The test will offer \$10,000 bonus for each year of affiliation with the Selected Reserve of the Army, up to a maximum of 3 years. Physicians must choose 1, 2, or 3 years of affiliation at time of application. Bonuses will be paid annually at the beginning of each year of agreed affiliation.

TEST PARAMETERS: The design of the test stipulates that bonuses be offered in certain geographic areas. To qualify, applicants must reside within those areas at the time of accession.

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PERSONALS

OSSAMA AL-MEFTY of UMC made a presentation at the Third International Meeting of the Management of Trauma and Critically Ill Patients in Aleppo and Syria.

GENE R. BARRETT of Jackson has been inducted into the International Society of the Knee.

JOHN B. BUNDRICK has associated with The Medical Center, P.A. of Jackson for the practice of internal medicine.

J. PATRICK CHANEY has associated with Physicians and Surgeons Clinic of Amory for the practice of obstetrics and gynecology.

BRYAN COWAN of UMC was speaker at Doctor's Hospital in Little Rock, Arkansas, and at continuing education conferences in Tupelo and Cleveland, Ohio.

VIRGINIA CRAWFORD of Hattiesburg has been named medical director of the University of Southern Mississippi Student Health Services.

JAMES R. DAY has associated with Infant, Children and Adolescent Clinic in Tupelo for the practice of general pediatrics.

MARK C. DROFFNER of Liberty announces the association of ISABELLA STRICKLAND for the practice of family medicine at Amite County Medical Services.

WILLIAM H. DURHAM announces the opening of his office for the practice of internal medicine at 300 Marion Avenue in McComb.

MARY ANNE FRANK-TARSI announces the opening of her office for the practice of family medicine at 965 Avent Drive in Grenada.

ALLEN GERSH of Hattiesburg has been reappointed as a clinical assistant professor at Tulane University School of Medicine.

WILLIAM J. GIBSON, JR. of Jackson will participate in the Fall 1989 Leadership Seminar in the Humanities at Millsaps College.

A. LAMAR GLAZE has associated with the Hattiesburg Clinic for the practice of obstetrics and gynecology.

G. ELI HOWELL, II, of Hattiesburg has been appointed as a clinical associate in plastic and reconstructive surgery at Tulane University Medical Center.

JAMES HUGHES of UMC was guest speaker at Peruvian Orthopedic Hospital in Lima, Peru.

J. HARVEY JOHNSTON of Jackson announces his retirement from the practice of surgery.

RAY KIMBLE of Hattiesburg has assumed duties as assistant medical director of psychiatry at Pine Grove Center.

JAMES LEAK has associated with the Field Clinic of Centreville for the practice of family medicine.

BRUCE LONGEST announces the opening of his office for the practice of family medicine at the clinic of Community Hospital of Calhoun County.

WILLIAM E. LOPER, III, has associated with The Vicksburg Clinic for the practice of family medicine.



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PERSONALS/Continued

JOHN J. McCLOSKEY of Pascagoula recently received an award for his work with the National Head and Spinal Cord Injury Prevention Program. The award, signed by then-President Ronald Reagan, is a President's Citation for Private Sector Initiatives.

JOHN B. MILAM of Jackson announces the association of JOHN H. McVEY for the practice of pediatric ophthalmology and adult strabismus.

GEORGE MOLL of UMC served as a member of the Comprehensive Part II Multidisciplinary Task Force for Reproductive and Endocrine Systems in Philadelphia, Pennsylvania.

ROBERT L. MOORE, JR., of Philadelphia announces the association of KEVIN NICHOLS for the practice of family medicine at 517 Center Avenue.

O. DIANNE MORAN has associated with the Hattiesburg Clinic for the practice of family medicine at the Family Practice Clinic, 1150 Berry Street in Prentiss.

WILLIAM C. NICHOLAS of UMC made a presentation at a staff meeting at Columbus Hospital.

STEFAN PRIBIL of Pascagoula made a presentation at a recent meeting of the Ocean Springs Rotary Club.

R. B. ROBISON announces the association of JAMES R. HUBBARD, JR., with the Saltillo Clinic.

ROBERT L. RUSSELL, JR., and JUDY M. RUSSELL have associated with the Hattiesburg Clinic for the practice of family medicine at Wiggins Clinic.

MICHAEL R. SEALS announces the opening of his office for the practice of neurology at 1020 Adams Street in Laurel.

CLIFF SEYLER of Pascagoula has been named chairman of a task force to study health education.

MICHAEL B. SHROCK announces the opening of his office for family practice, in association with RANDY NANCE, at Primary Care Medical Clinic in Philadelphia.

C. D. TAYLOR announces the association of STEPHEN P. JOHNS for the practice of family medicine at 113 Davis Avenue in Pass Christian.

TIM F. THOMPSON has associated with Creekmore Clinic in New Albany for the practice of family medicine.

Laurel Heart Clinic announces the retirement of WILLIAM E. WEEMS, and the assumption of his practice by CECIL T. WILLIAMS, JR.

W. LAMAR WEEMS of Jackson is a participant in the Fall 1989 Leadership Seminar in the Humanities at Millsaps College.

MIKE WEAVER has associated with Family Medicine Associates of Petal for the practice of family medicine.

OTHA E. WILLIAMS, JR., and JONATHAN HARRIS of Clarksdale announce the opening of Marks Specialty Clinic and the association of JOHNNIE E. CUMMINGS for the practice of general surgery and internal medicine.

STEVEN E. ZACHOW of Jackson announces the association of DAVID A. WAHL for the practice of radiation therapy and oncology.

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References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list. Textbooks, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the *Index Medicus*, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

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DEATHS

COCKRELL, JOHN V., Waco, TX. Born New York, NY, March 9, 1912; M.D., Columbia University College of Physicians and Surgeons, New York, NY, 1937; interned and surgery residency, 1937-42, New York; pathology residency, University Medical Center, Jackson, MS, 1969-71; member of Central Medical Society; died Aug. 9, 1989, age 77.

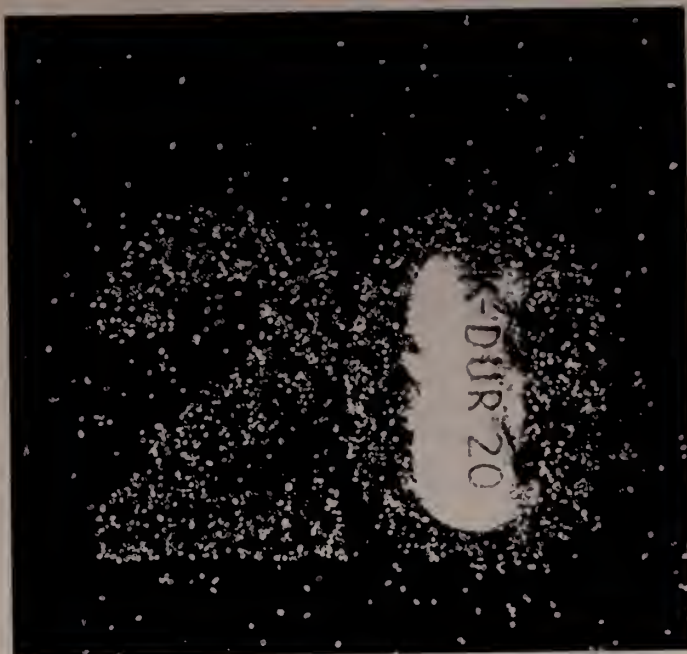
HALL, TOXEY E., Belzoni. Born Lumberton, MS, July 11, 1908; M.D., Emory University School of Medicine, Atlanta, GA, 1932; interned, one year, Hillman Hospital, Birmingham, AL; member of Delta Medical Society; died Aug. 30, 1989, age 81.

NOWELL, RICHARD M., Jackson. Born Philadelphia, MS, Aug. 4, 1941; M.D., University of Mississippi School of Medicine, Jackson, 1973; interned and medicine residency, University Medical Center, Jackson, 1973-76; fellowship in gastroenterology, University of Alabama Medical Center, Birmingham, 1976-78; member of Central Medical Society; died Aug. 12, 1989, age 48.

O'KELLY, WILLIAM B., Weir. Born State College, MS, Sept. 1, 1926; M.D., University of Texas Southwestern School of Medicine, Dallas, 1951; interned one year, John Gaston Hospital, Memphis, TN; member of North Central Medical Society, died July 29, 1989, age 62.

PENNINGTON, EDWARD, Ackerman. Born Dec. 17, 1912, Decatur, MS; M.D., University of Tennessee School of Medicine, Memphis, 1947; interned one year, Baptist Memorial Hospital, Memphis, 1947-48; member of North Central Medical Society; died July 7, 1989, age 80.

WHITFIELD, E. L., Florence; Born Florence, MS, May 14, 1921; M.D., University of Tennessee School of Medicine, Memphis, 1945; interned one year, Naval Hospital, Portsmouth, VA; member of Central Medical Society, died Aug. 9, 1989, age 68.



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1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically; however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia.—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium-Sparing Diuretics.—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions.—Potassium chloride tablets have produced stenotic and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40–50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis.—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS, WARNINGS, AND OVERDOSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS AND WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS AND WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT-interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10–20 units of insulin per 1,000 ml.
3. Correction of acidosis, if present, with intravenous sodium bicarbonate.
4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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NEW MEMBERS

BANAHAN, B. F., Jackson. Born Shreveport, LA, Jan. 9, 1933; M.D., Tulane University School of Medicine, New Orleans, 1957; one year of internship and one year family medicine residency, University Medical Center, Jackson, MS; elected by Central Medical Society.

BELKNAP, AMOS D., Jackson. Born Jackson, MS, Dec. 11, 1954; M.D., University of Mississippi School of Medicine, Jackson, 1979; interned one year, same; elected by Central Medical Society.

SUTTON, LAWRENCE M., JR., Vicksburg. Born Brookhaven, MS, Sept. 8, 1950; M.D., Meharry Medical College School of Medicine, Nashville, TN, 1975; interned and general surgery residency, Homer G. Phillips Hospital, St. Louis, MO, 1975–1980; elected by West Mississippi Medical Society.

Medico-Legal Brief

Physician Not Liable For Patient's Suicide

An emergency room physician had no duty to give continuous attention to prevent a patient's suicide, the Alabama Supreme Court ruled.

A police officer and a rescue squad found the patient in a motel, lying in bed and complaining of chest pains. The physician learned from the patient's son that he had been drinking alcohol and could have taken Valium. The physician made a diagnosis of probable alcohol abuse, possible drug abuse, and chest pains.

The patient was energetic and unruly, and the physician inferred that he had not consumed dangerous quantities of the sedative. However, he took precautionary measures and prescribed treatment to prevent a drug overdose. The results of a blood pressure test and an electrocardiogram were normal, as was an eye examination. The physician gave the patient an injection of nitroglycerine to alleviate the chest pains and ordered a sedative and restraints if necessary.

The patient continued to be disorderly, and the physician had a nurse call the police. The same officer came and took the patient to jail when he refused to cooperate. The physician became aware of the patient's dismissal from the hospital when he

read and signed the emergency room record. He later stated the patient was of sufficient mind to decide for himself whether to go to jail or receive further treatment.

The patient was left unattended in a jail cell. When his wife and daughter went to the jail to check on him, he was found unconscious and slumped over with one end of a T-shirt tied around his neck and the other end to a bar of the cell door. A pathologist attributed his death to asphyxiation and later testified that he had committed suicide.

The patient's widow brought an action for malpractice against the physician and others, based on the theory that the physician should have foreseen the suicide and should have taken measures to prevent it from happening. The widow's medical expert testified that the physician violated the standard of care by allowing the patient to leave the hospital with a dangerous mixture of Valium and alcohol in his system and not making provisions to bring him back.

The trial court ruled that the physician had no duty to render continuous action to prevent the "likely" occurrence of the suicide. The court granted a directed verdict for the physician.

On appeal, the court said that the widow failed to introduce evidence that the physician could have reasonably foreseen her husband's suicide. Her expert did not testify that competent physicians would have thought that suicide was a reasonably foreseeable contingency to be guarded against and that the physician breached the standard of care by failing to guard against it. The record did not indicate that the patient had a history of suicidal proclivities. Therefore, the court found that the trial court's verdict was proper and affirmed — *Keebler v. Winfield Carraway Hospital*, 531 So.2d 841 (Ala.Sup.Ct., Sept. 2, 1988)

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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon® is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

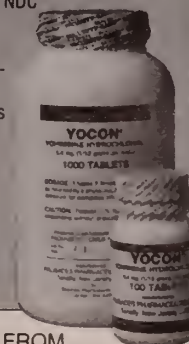
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon® 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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DESCRIPTION

Meperidine hydrochloride is ethyl 1-methyl-4-phenylisopropylcarbamate hydrochloride, a white crystalline substance with a melting point of 186°C to 189°C. It is readily soluble in water and has a neutral reaction and a slightly bitter taste. The solution is not decomposed by a short period of boiling.

The syrup is a pleasant-tasting, nonalcoholic, banana-flavored solution containing 50 mg of DEMEROL hydrochloride, brand of meperidine hydrochloride, per 5 mL teaspoon (25 drops contain 13 mg of DEMEROL hydrochloride). The tablets contain 50 mg or 100 mg of the analgesic.

DEMEROL hydrochloride injectable is supplied in Carpuject[™] Sterile Cartridge-Needle Unit of 2.5% (25 mg/1 mL), 5% (50 mg/1 mL), 7.5% (75 mg/1 mL), and 10% (100 mg/1 mL). Uni-Amp[™] Unit Dose Pak — ampuls of 5% solution (25 mg/0.5 mL), (50 mg/1 mL), (75 mg/1.5 mL), (100 mg/2 mL), and 10% solution (100 mg/1 mL), Uni-Nest[™] Pak — ampuls of 5% solution (25 mg/0.5 mL), (50 mg/1 mL), (75 mg/1.5 mL), (100 mg/2 mL), and 10% solution (100 mg/1 mL). Multiple-dose vials of 5% and 10% solutions contain metacresol 0.1% as preservative.

The pH of DEMEROL solutions is adjusted between 3.5 and 6 with sodium hydroxide or hydrochloric acid.

DEMEROL hydrochloride, brand of meperidine hydrochloride, 5 percent solution has a specific gravity of 1.0086 at 20°C and 10 percent solution, a specific gravity of 1.0165 at 20°C.

Inactive Ingredients — TABLETS: Calcium Sulfate, Dibasic Calcium Phosphate, Starch, Stearic Acid, Talc. SYRUP: Benzoic Acid, Flavor, Liquid Glucose, Purified Water, Saccharin Sodium.

CLINICAL PHARMACOLOGY

Meperidine hydrochloride is a narcotic analgesic with multiple actions qualitatively similar to those of morphine; the most prominent of these involve the central nervous system and organs composed of smooth muscle. The principal actions of therapeutic value are analgesia and sedation.

There is some evidence which suggests that meperidine may produce less smooth muscle spasm, constipation, and depression of the cough reflex than equianalgesic doses of morphine. Meperidine, in 60 mg to 80 mg parenteral doses, is approximately equivalent in analgesic effect to 10 mg of morphine. The onset of action is slightly more rapid than with morphine, and the duration of action is slightly shorter. Meperidine is significantly less effective by the oral than by the parenteral route, but the exact ratio of oral to parenteral effectiveness is unknown.

INDICATIONS AND USAGE

For the relief of moderate to severe pain (parenteral and oral forms)
For preoperative medication (parenteral form only)
For support of anesthesia (parenteral form only)
For obstetrical analgesia (parenteral form only)

CONTRAINDICATIONS

Hypersensitivity to meperidine.

Meperidine is contraindicated in patients who are receiving monoamine oxidase (MAO) inhibitors or those who have recently received such agents. Therapeutic doses of meperidine have occasionally precipitated unpredictable, severe, and occasionally fatal reactions in patients who have received such agents within 14 days. The mechanism of these reactions is unclear, but may be related to a preexisting hyperphenylalaninemia. Some have been characterized by coma, severe respiratory depression, cyanosis, and hypotension, and have resembled the syndrome of acute narcotic overdose. In other reactions the predominant manifestations have been hyperexcitability, convulsions, tachycardia, hyperpyrexia, and hypertension. Although it is not known that other narcotics are free of the risk of such reactions, virtually all of the reported reactions have occurred with meperidine. If a narcotic is needed in such patients, a sensitivity test should be performed in which repeated, small, incremental doses of morphine are administered over the course of several hours while the patient's condition and vital signs are under careful observation. (Intravenous hydrocortisone or prednisolone have been used to treat severe reactions, with the addition of intravenous chlorpromazine in those cases exhibiting hypertension and hyperpyrexia. The usefulness and safety of narcotic antagonists in the treatment of these reactions is unknown.)

Solutions of DEMEROL and barbiturates are chemically incompatible.

WARNINGS

Drug Dependence. Meperidine can produce drug dependence of the morphine type and therefore has the potential for being abused. Psychic dependence, physical dependence, and tolerance may develop upon repeated administration of meperidine, and it should be prescribed and administered with the same degree of caution appropriate to the use of morphine. Like other narcotics, meperidine is subject to the provisions of the Federal narcotic laws.

Interaction with Other Central Nervous System Depressants. MEPERIDINE SHOULD BE USED WITH GREAT CAUTION AND IN REDUCED DOSAGE IN PATIENTS WHO ARE CONCURRENTLY RECEIVING OTHER NARCOTIC ANALGESICS, GENERAL ANESTHETICS, PHENOTHIAZINES, OTHER TRANQUILIZERS (SEE OASAGE AND ADMINISTRATION), SEDATIVE-HYPNOTICS (INCLUDING BARBITURATES), TRICYCLIC ANTIDEPRESSANTS AND OTHER

CNS DEPRESSANTS (INCLUDING ALCOHOL), RESPIRATORY DEPRESSION, HYPOTENSION, AND PROFOUND SEDATION OR COMA MAY RESULT.

Head Injury and Increased Intracranial Pressure. The respiratory depressant effects of meperidine and its capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions, or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries. In such patients, meperidine must be used with extreme caution and only if its use is deemed essential.

Intravenous Use. If necessary, meperidine may be given intravenously, but the injection should be given very slowly, preferably in the form of a diluted solution. Rapid intravenous injection of narcotic analgesics, including meperidine, increases the incidence of adverse reactions; severe respiratory depression, apnea, hypotension, peripheral circulatory collapse, and cardiac arrest have occurred. Meperidine should not be administered intravenously unless a narcotic antagonist and the facilities for assisted or controlled respiration are immediately available. When meperidine is given parenterally, especially intravenously, the patient should be lying down.

Asthma and Other Respiratory Conditions. Meperidine should be used with extreme caution in patients having an acute asthmatic attack, patients with chronic obstructive pulmonary disease or cor pulmonale, patients having a substantially decreased respiratory reserve, and patients with preexisting respiratory depression, hypoxia, or hypercapnia. In such patients, even usual therapeutic doses of narcotics may decrease respiratory drive while simultaneously increasing airway resistance to the point of apnea.

Hypotensive Effect. The administration of meperidine may result in severe hypotension in the postoperative patient or any individual whose ability to maintain blood pressure has been compromised by a depleted blood volume or the administration of drugs such as the phenothiazines or certain anesthetics.

Usage in Ambulatory Patients. Meperidine may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery. The patient should be cautioned accordingly.

Meperidine, like other narcotics, may produce orthostatic hypotension in ambulatory patients.

Usage in Pregnancy and Lactation. Meperidine should not be used in pregnant women prior to the labor period, unless in the judgment of the physician the potential benefits outweigh the possible hazards, because safe use in pregnancy prior to labor has not been established relative to possible adverse effects on fetal development.

When used as an obstetrical analgesic, meperidine crosses the placental barrier and can produce depression of respiration and psychophysiological functions in the newborn. Resuscitation may be required (see section on OVERDOSAGE).

Meperidine appears in the milk of nursing mothers receiving the drug.

PRECAUTIONS

As with all intramuscular preparations DEMEROL intramuscular injection should be injected well within the body of a large muscle.

Supraventricular Tachycardias. Meperidine should be used with caution in patients with atrial flutter and other supraventricular tachycardias because of a possible vagolytic action which may produce a significant increase in the ventricular response rate.

Convulsions. Meperidine may aggravate preexisting convulsions in patients with convulsive disorders. If dosage is escalated substantially above recommended levels because of tolerance development, convulsions may occur in individuals without a history of convulsive disorders.

Acute Abdominal Conditions. The administration of meperidine or other narcotics may obscure the diagnosis or clinical course in patients with acute abdominal conditions.

Special Risk Patients. Meperidine should be given with caution and the initial dose should be reduced in certain patients such as the elderly or debilitated, and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, and prostatic hypertrophy or urethral stricture.

ADVERSE REACTIONS

The major hazards of meperidine, as with other narcotic analgesics, are respiratory depression and, to a lesser degree, circulatory depression; respiratory arrest, shock, and cardiac arrest have occurred.

The most frequently observed adverse reactions include light-headedness, dizziness, sedation, nausea, vomiting, and sweating. These effects seem to be more prominent in ambulatory patients and in those who are not experiencing severe pain. In such individuals, lower doses are advisable. Some adverse reactions in ambulatory patients may be alleviated if the patient lies down.

Other adverse reactions include

Nervous System. Euphoria, dysphoria, weakness, headache, agitation, tremor, uncoordinated muscle movements, severe convulsions, transient hallucinations and disorientation, visual disturbances. Inadvertent injection about a nerve trunk may result in sensory-motor paralysis which is usually, though not always, transitory.

Gastrointestinal. Dry mouth, constipation, biliary tract spasm.

Cardiovascular. Flushing of the face, tachycardia, bradycardia, palpitation, hypotension (see Warnings), syncope, phlebitis following intravenous injection.

Genitourinary. Urinary retention.

Allergic. Pruritus, urticaria, other skin rashes, wheal and flare over the vein with intravenous injection.

Other. Pain at injection site; local tissue irritation and induration following subcutaneous injection, particularly when repeated, anti-diuretic effect.

DOSSAGE AND ADMINISTRATION

For Relief of Pain

Dosage should be adjusted according to the severity of the pain and the response of the patient. While subcutaneous administration is suitable for occasional use, intramuscular administration is preferred when repeated doses are required. If intravenous administration is required, dosage should be decreased and the injection made

very slowly, preferably utilizing a diluted solution. Meperidine is effective orally than on parenteral administration. The dose of DEMEROL should be proportionately reduced (usually by 25 to 50 percent) when administered concomitantly with phenothiazines, many other tranquilizers since they potentiate the action of DEMEROL.

Adults. The usual dosage is 50 mg to 150 mg intramuscularly subcutaneously, or orally, every 3 or 4 hours as necessary.

Children. The usual dosage is 0.5 mg/lb to 0.8 mg/lb intramuscularly subcutaneously, or orally up to the adult dose, every 3 or 4 hours as necessary.

Each dose of the syrup should be taken in one-half glass of water if taken undiluted, it may exert a slight topical anesthetic effect on mucous membranes.

For Preoperative Medication

Adults. The usual dosage is 50 mg to 100 mg intramuscularly subcutaneously, 30 to 90 minutes before the beginning of anesthesia.

Children. The usual dosage is 0.5 mg/lb to 1 mg/lb intramuscularly or subcutaneously up to the adult dose, 30 to 90 minutes before beginning of anesthesia.

For Support of Anesthesia

Repeated slow intravenous injections of fractional doses (eg, 1 mg/mL) or continuous intravenous infusion of a more dilute solution (eg, 1 mg/mL) should be used. The dose should be titrated to the needs of the patient and will depend on the premedication and type of anesthesia being employed, the characteristics of the particular patient, and the nature and duration of the operative procedure.

For Obstetrical Analgesia

The usual dosage is 50 mg to 100 mg intramuscularly or subcutaneously when pain becomes regular, and may be repeated at 1- to 3-hour intervals.

OVERDOSAGE

Symptoms. Serious overdosage with meperidine is characterized by respiratory depression (a decrease in respiratory rate and/or tidal volume, Cheyne-Stokes respiration, cyanosis), extreme somnolence progressing to stupor or coma, skeletal muscle flaccidity, cold and clammy skin, and sometimes bradycardia and hypotension. In severe overdosage, particularly by the intravenous route, apnea, circulatory collapse, cardiac arrest, and death may occur.

Treatment. Primary attention should be given to the reestablishment of adequate respiratory exchange through provision of a patent airway and institution of assisted or controlled ventilation. The narcotic antagonist, naloxone hydrochloride, is a specific antidote against respiratory depression which may result from overdosage or unusual sensitivity to narcotics, including meperidine. Therefore, an appropriate dose of this antagonist should be administered, preferably by the intravenous route, simultaneously with efforts at respiratory resuscitation.

An antagonist should not be administered in the absence of clinically significant respiratory or cardiovascular depression.

Oxygen, intravenous fluids, vasopressors, and other supportive measures should be employed as indicated.

In cases of overdosage with DEMEROL tablets, the stomach should be evacuated by emesis or gastric lavage.

NOTE: In an individual physically dependent on narcotics, the administration of the usual dose of a narcotic antagonist will precipitate an acute withdrawal syndrome. The severity of this syndrome will depend on the degree of physical dependence and the dose of antagonist administered. The use of narcotic antagonists in such individuals should be avoided if possible. If a narcotic antagonist must be used to treat serious respiratory depression in the physically dependent patient, the antagonist should be administered with extreme care and only one-fifth to one-tenth the usual initial dose administered.

HOW SUPPLIED

For Parenteral Use

Detecto-Seal[™] — Carpuject[™] Sterile Cartridge-Needle Unit — 2.5 percent (25 mg per 1 mL) **NDC 0024-0324-02**, 5 percent (50 mg per 1 mL) **NDC 0024-0325-02**, 7.5 percent (75 mg per 1 mL) **NDC 0024-0326-02**; and 10 percent (100 mg per 1 mL) **NDC 0024-0328-02** all in boxes of 10.

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Uni-Nest[™] — 5 percent solution; ampuls of 0.5 mL (25 mg) **NDC 0024-0371-04**, 1 mL (50 mg) **NDC 0024-0372-04**, 1½ mL (75 mg) **NDC 0024-0373-04**, and 2 mL (100 mg) **NDC 0024-0374-04** all in boxes of 25; and 10 percent solution, ampuls of 1 mL (100 mg) **NDC 0024-0375-04** in boxes of 25.

Vials — 5 percent multiple-dose vials of 30 mL **NDC 0024-0329-04** and 10 percent multiple-dose vials of 20 mL **NDC 0024-0331-01** all in boxes of 1.

Note: The pH of DEMEROL solutions is adjusted between 3.5 and 6 with sodium hydroxide or hydrochloric acid. Multiple-dose vials contain metacresol 0.1 percent as preservative. No preservatives are added to the ampuls or CARPUJECT Sterile Cartridge-Needle Unit.

For Oral Use

Tablets of 50 mg, bottles of 100 (**NDC 0024-0335-04**) and 500 (**NDC 0024-0335-06**); Hospital Blister Pak of 25 (**NDC 0024-0335-04**), 100 mg, bottles of 100 (**NDC 0024-0337-04**) and 500 (**NDC 0024-0337-06**); Hospital Blister Pak of 25 (**NDC 0024-0337-02**).

Syrup, nonalcoholic, banana-flavored 50 mg per 5 mL teaspoon, bottles of 16 fl oz (**NDC 0024-0332-06**).

Revised May 1988

OW-55H



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VASOTEC is available in 2.5-mg, 5-mg, 10-mg, and 20-mg tablet strengths.

Contraindications: VASOTEC[®] (Enalapril Maleate, MSD) is contraindicated in patients who are hypersensitive to this product and in patients with a history of angioedema related to previous treatment with an ACE inhibitor.

Warnings: **Angioedema:** Angioedema of the face, extremities, lips, tongue, glottis, and/or larynx has been reported in patients treated with ACE inhibitors, including VASOTEC. In such cases, VASOTEC should be promptly discontinued and the patient carefully observed until the swelling disappears. In instances where swelling has been confined to the face and lips, the condition has generally resolved without treatment, although antihistamines have been useful in relieving symptoms. Angioedema associated with laryngeal edema may be fatal. **Where there is involvement of the tongue, glottis, or larynx likely to cause airway obstruction, appropriate therapy, e.g., subcutaneous epinephrine solution 1:1000 (0.3 mL to 0.5 mL), should be promptly administered.** (See ADVERSE REACTIONS.)

Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed; caution should be observed when initiating therapy (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, Drug Interactions and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: **General:** **Impaired Renal Function:** As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Osmotic reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See Drug Interactions.)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: **Patients on Diuretic Therapy:** Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or reducing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-channel blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not fetotoxic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women. However, data are available that show enalapril crosses the human placenta. Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC[®] (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome: Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely. Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypertension, or the underlying prematurity.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of ¹⁴C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION: The most frequent clinical adverse experiences in controlled trials were: headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were: diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), or orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (see WARNINGS, Hypotension); cardiac arrest, pulmonary embolism and infarction, rhythm disturbances; atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (see PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Other: Vasculitis, muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure (see WARNINGS.)

Clinical Laboratory Test Findings:

Serum Electrolytes: Hyperkalemia (see PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics or in patients with renal artery stenosis. (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 1% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decreases of approximately 0.3 g% and 1.0 vol%, respectively) occurred frequently in either hypertension or heart failure patients treated with VASOTEC but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Other (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: **Hypertension:** In patients who are currently being treated with a diuretic, symptomatic hypotension occasionally may occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (see PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dosing of the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACOLOGY, Pharmacodynamics and Clinical Effects.) Dosage may be adjusted depending upon clinical or pharmacodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium < 130 mEq/L) or with serum creatinine > 1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, Heart Failure, WARNINGS, and PRECAUTIONS, Drug Interactions.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD Representative or see Prescribing Information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19380. J6VS1BR21(817)

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NOVEMBER

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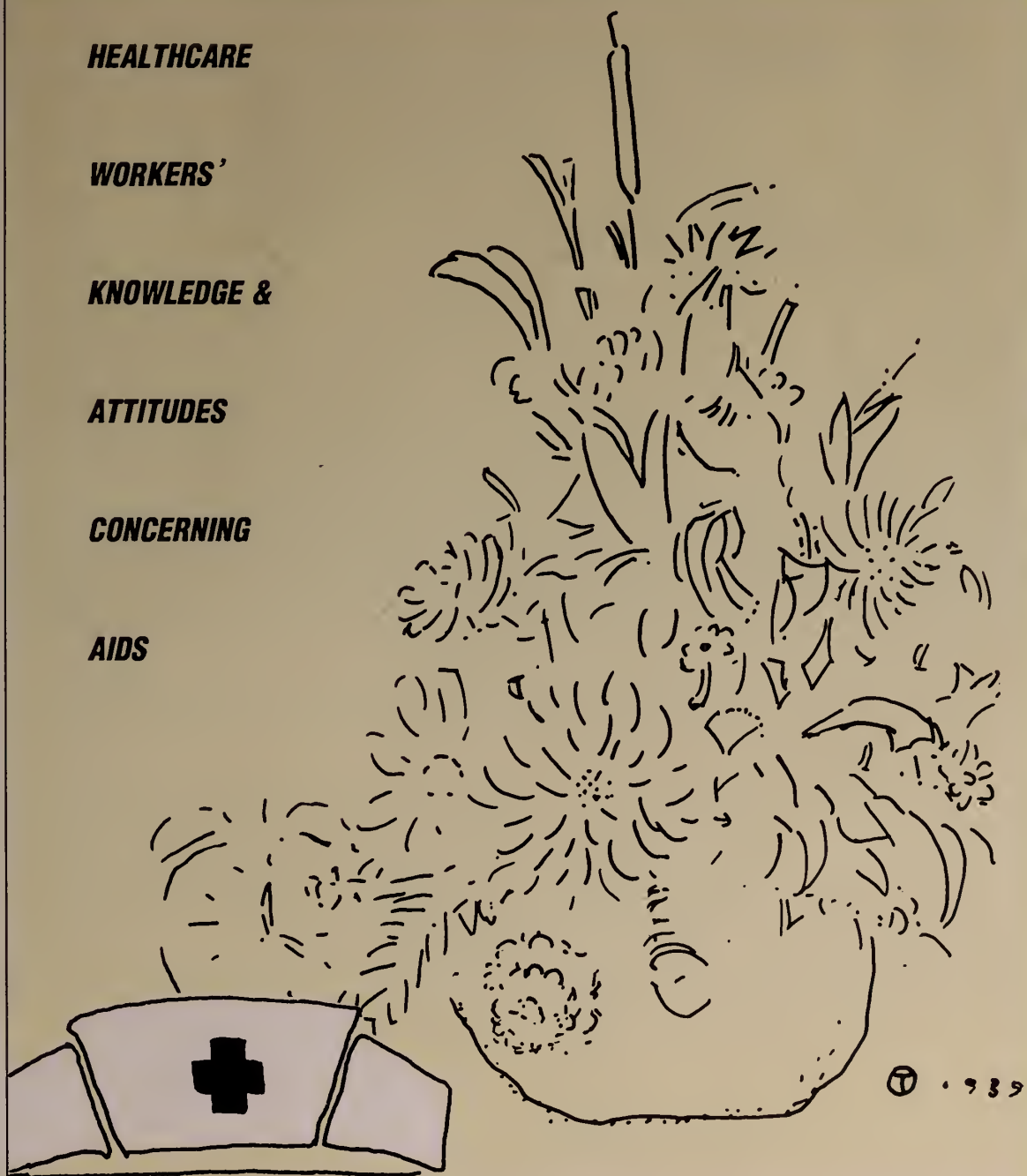
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ATTITUDES

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AIDS



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OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

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THE JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION (ISSN 0026-6393) is owned and published monthly by the Mississippi State Medical Association, founded 1856, at 735 Riverside Drive, Jackson, Mississippi 39202. Subscription rate, \$25.00 per annum; \$35.00 per annum for foreign subscriptions; \$2.25 per copy, as available. Advertising rates furnished on request. Printed by The Ovid Bell Press, Inc., Fulton, Missouri. Second-class postage paid at Jackson, Mississippi, and at additional mailing offices. POSTMASTER: Send address changes to Mississippi State Medical Association, P.O. Box 5229, Jackson, Mississippi 39216.

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NEWSLETTER

November 1989

Dear Doctor:

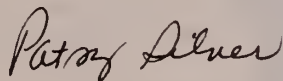
The National Practitioner Data Bank, authorized by the Health Care Quality Improvement Act of 1986, is expected to begin operations within six months. Under the program, state medical and dental boards, along with hospitals and other health care organizations, will be required to report within 30 days any actions against health care professionals which affect licensing or clinical privileges. The system also will compile information on malpractice payments made on behalf of physicians, dentists and other health care workers.

HHS revised the rules to require reporting only of adverse actions reached through a formal peer review process, and only when based on professional competence or conduct. Hospitals and other health care entities will be required to consult the data bank before granting clinical privileges and making staff appointments. Also, state licensing boards will be permitted to query the bank for information about health care providers. Procedures have been set up whereby health care professionals may dispute information about themselves which may be recorded in the data bank.

According to a survey by the Public Citizen Health Research Group, disciplinary actions against physicians by state medical boards in 1987 increased 17% over the previous year. Mississippi, with 6.15 actions per 1,000 physicians, ranked fourth highest in disciplinary actions. Most actions against physicians were taken in West Virginia (8.58 per 1,000 physicians). Fewest actions took place in Kansas (0.45), Connecticut (0.71), Montana (0.76), Arkansas (0.82), and Tennessee (0.86).

The president of the AMA, Dr. Alan Nelson, will address the MSMA House of Delegates session on Thursday, May 31, and will attend the President's Reception that evening. Mark your calendar now, and plan to participate in the 122nd Annual Session, May 30-June 3, 1990, at the Coliseum Ramada Inn in Jackson.

Sincerely,



Patsy Silver
Managing Editor

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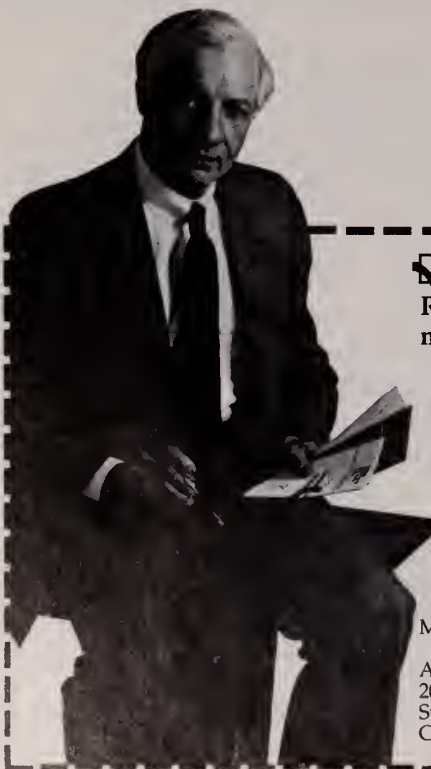
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DATELINE

MSMA Delegates To Meet In Special Session

Jackson, MS - MSMA will conduct a membership leadership conference and special session of the House of Delegates on January 18, 1990 at the Ramada Renaissance Hotel in Jackson. The agenda will include discussions of current health issues before Congress and the Mississippi Legislature, and physician reimbursement under the resource-based relative value schedule. A reception for the Legislature will conclude the day.

Nominations Sought For Community Service Award

Jackson, MS - MSMA is soliciting nominations from component societies for the 1990 MSMA Community Service Award, presented annually to an MSMA member who has provided outstanding community and civic leadership. The award consists of a plaque and a \$500 contribution to a civic organization designated by the recipient. To recognize one of your colleagues for exceptional service, submit his/her name to your component society secretary.

Request Scientific Exhibit Space Now

Jackson, MS - MSMA members who wish to participate in the Scientific Exhibit during the 122nd Annual Session, May 30-June 3, 1990, should apply now for exhibit space. Exhibitors should send to the MSMA office a letter requesting exhibit space. Please provide the title of the exhibit, names of all exhibitors, and the estimated number of linear feet the display will require.

Medicaid To Survey Mississippi Physicians

Jackson, MS - The Medicaid Commission will soon conduct two surveys of physicians in the state. With advice and input from MSMA, the surveys seek to: (1) determine how the Medicaid program can be improved and physician participation increased, and (2) collect information on usual and customary fees charged by Mississippi physicians as compared to fees paid by Medicaid. Results may lead to recommended improvements in Medicaid.

MSMA/MS Bar Association Liaison Committee

Jackson, MS - MSMA will reactivate its liaison committee with the MS Bar Association to reconsider and update the "Interprofessional Code" adopted by the two organizations several years ago. The committee also will be charged with considering timely and mutual concerns of the two professions. Representing MSMA on the committee are Drs. George Purvis, Tim Alford, David Steckler, David Owen, Roy Duncan and Jack Evans.

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The syrup is a pleasant-tasting, nonalcoholic, banana-flavored solution containing 50 mg of DEMEROL hydrochloride, brand of meperidine hydrochloride, per 5 mL teaspoon (25 drops contain 13 mg of DEMEROL hydrochloride). The tablets contain 50 mg or 100 mg of the analgesic.

DEMEROL hydrochloride injectable is supplied in Carpuject® Sterile Cartridge-Needle Unit of 2.5% (25 mg/1 mL), 5% (50 mg/1 mL), 7.5% (75 mg/1 mL), and 10% (100 mg/1 mL). Uni-Amp® Unit Oose Pak — ampuls of 5% solution (25 mg/0.5 mL), (50 mg/1 mL), (75 mg/1.5 mL), (100 mg/2 mL), and 10% solution (100 mg/1 mL). Uni-Nest™ Pak — ampuls of 5% solution (25 mg/0.5 mL), (50 mg/1 mL), (75 mg/1.5 mL), (100 mg/2 mL), and 10% solution (100 mg/1 mL). Multiple-dose vials of 5% and 10% solutions contain metacresol 0.1% as preservative.

The pH of DEMEROL solutions is adjusted between 3.5 and 6 with sodium hydroxide or hydrochloric acid.

DEMEROL hydrochloride, brand of meperidine hydrochloride, 5 percent solution has a specific gravity of 1.0086 at 20°C and 10 percent solution, a specific gravity of 1.0165 at 20°C.

Inactive Ingredients — TABLETS: Calcium Sulfate, Dibasic Calcium Phosphate, Starch, Stearic Acid, Talc, SYRUP: Benzoic Acid, Flavor, Liquid Glucose, Purified Water, Saccharin Sodium.

CLINICAL PHARMACOLOGY

Meperidine hydrochloride is a narcotic analgesic with multiple actions qualitatively similar to those of morphine; the most prominent of these involve the central nervous system and organs composed of smooth muscle. The principal actions of therapeutic value are analgesia and sedation.

There is some evidence which suggests that meperidine may produce less smooth muscle spasm, constipation, and depression of the cough reflex than equianalgesic doses of morphine. Meperidine, in 60 mg to 80 mg parenteral doses, is approximately equivalent in analgesic effect to 10 mg of morphine. The onset of action is slightly more rapid than with morphine, and the duration of action is slightly shorter. Meperidine is significantly less effective by the oral than by the parenteral route, but the exact ratio of oral to parenteral effectiveness is unknown.

INDICATIONS AND USAGE

For the relief of moderate to severe pain (parenteral and oral forms)
For preoperative medication (parenteral form only)
For support of anesthesia (parenteral form only)
For obstetrical analgesia (parenteral form only)

CONTRAINDICATIONS

Hypersensitivity to meperidine.

Meperidine is contraindicated in patients who are receiving monoamine oxidase (MAO) inhibitors or those who have recently received such agents. Therapeutic doses of meperidine have occasionally precipitated unpredictable, severe, and occasionally fatal reactions in patients who have received such agents within 14 days. The mechanism of these reactions is unclear, but may be related to a preexisting hyperphenylalaninemia. Some have been characterized by coma, severe respiratory depression, cyanosis, and hypotension, and have resembled the syndrome of acute narcotic overdose. In other reactions the predominant manifestations have been hyperexcitability, convulsions, tachycardia, hyperpyrexia, and hypertension. Although it is not known that other narcotics are free of the risk of such reactions, virtually all of the reported reactions have occurred with meperidine. If a narcotic is needed in such patients, a sensitivity test should be performed in which repeated, small, incremental doses of morphine are administered over the course of several hours while the patient's condition and vital signs are under careful observation. (Intravenous hydrocortisone or prednisolone have been used to treat severe reactions, with the addition of intravenous chlorpromazine in those cases exhibiting hypertension and hyperpyrexia. The usefulness and safety of narcotic antagonists in the treatment of these reactions is unknown.)

Solutions of DEMEROL and barbiturates are chemically incompatible.

WARNINGS

Drug Dependence. Meperidine can produce drug dependence of the morphine type and therefore has the potential for being abused. Psychic dependence, physical dependence, and tolerance may develop upon repeated administration of meperidine, and it should be prescribed and administered with the same degree of caution appropriate to the use of morphine. Like other narcotics, meperidine is subject to the provisions of the Federal narcotic laws.

Interaction with Other Central Nervous System Depressants. MEPERIDINE SHOULD BE USED WITH GREAT CAUTION AND IN REDUCED DOSAGE IN PATIENTS WHO ARE CONCURRENTLY RECEIVING OTHER NARCOTIC ANALGESICS, GENERAL ANESTHETICS, PHENOTHIAZINES, OTHER TRANQUILIZERS (SEE DOSAGE AND ADMINISTRATION), SEOTIVE-HYPNOTICS (INCLUDING BARBITURATES), TRICYCLIC ANTIDEPRESSANTS AND OTHER

CNS DEPRESSANTS (INCLUDING ALCOHOL), RESPIRATORY DEPRESSION, HYPOTENSION, AND PROFOUND SEDATION OR COMA MAY RESULT.

Head Injury and Increased Intracranial Pressure. The respiratory depressant effects of meperidine and its capacity to elevate cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions, or a preexisting increase in intracranial pressure. Furthermore, narcotics produce adverse reactions which may obscure the clinical course of patients with head injuries. In such patients, meperidine must be used with extreme caution and only if its use is deemed essential.

Intravenous Use. If necessary, meperidine may be given intravenously, but the injection should be given very slowly, preferably in the form of a diluted solution. Rapid intravenous injection of narcotic analgesics, including meperidine, increases the incidence of adverse reactions; severe respiratory depression, apnea, hypotension, peripheral circulatory collapse, and cardiac arrest have occurred. Meperidine should not be administered intravenously unless a narcotic antagonist and the facilities for assisted or controlled respiration are immediately available. When meperidine is given parenterally, especially intravenously, the patient should be lying down.

Asthma and Other Respiratory Conditions. Meperidine should be used with extreme caution in patients having an acute asthmatic attack, patients with chronic obstructive pulmonary disease or cor pulmonale, patients having a substantially decreased respiratory reserve, and patients with preexisting respiratory depression, hypoxia, or hypercapnia. In such patients, even usual therapeutic doses of narcotics may decrease respiratory drive while simultaneously increasing airway resistance to the point of apnea.

Hypotensive Effect. The administration of meperidine may result in severe hypotension in the postoperative patient or any individual whose ability to maintain blood pressure has been compromised by a depleted blood volume or the administration of drugs such as the phenothiazines or certain anesthetics.

Usage in Ambulatory Patients. Meperidine may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks such as driving a car or operating machinery. The patient should be cautioned accordingly.

Meperidine, like other narcotics, may produce orthostatic hypotension in ambulatory patients.

Usage in Pregnancy and Lactation. Meperidine should not be used in pregnant women prior to the labor period, unless in the judgment of the physician the potential benefits outweigh the possible hazards, because safe use in pregnancy prior to labor has not been established relative to possible adverse effects on fetal development.

When used as an obstetrical analgesic, meperidine crosses the placental barrier and can produce depression of respiration and psychophysiological functions in the newborn. Resuscitation may be required (see section on OVERDOSAGE).

Meperidine appears in the milk of nursing mothers receiving the drug.

PRECAUTIONS

As with all intramuscular preparations DEMEROL intramuscular injection should be injected well within the body of a large muscle.

Supraventricular Tachycardias. Meperidine should be used with caution in patients with atrial flutter and other supraventricular tachycardias because of a possible vagolytic action which may produce a significant increase in the ventricular response rate.

Convulsions. Meperidine may aggravate preexisting convulsions in patients with convulsive disorders. If dosage is escalated substantially above recommended levels because of tolerance development, convulsions may occur in individuals without a history of convulsive disorders.

Acute Abdominal Conditions. The administration of meperidine or other narcotics may obscure the diagnosis or clinical course in patients with acute abdominal conditions.

Special Risk Patients. Meperidine should be given with caution and the initial dose should be reduced in certain patients such as the elderly or debilitated, and those with severe impairment of hepatic or renal function, hypothyroidism, Addison's disease, and prostatic hypertrophy or urethral stricture.

ADVERSE REACTIONS

The major hazards of meperidine, as with other narcotic analgesics, are respiratory depression and, to a lesser degree, circulatory depression; respiratory arrest, shock, and cardiac arrest have occurred.

The most frequently observed adverse reactions include light-headedness, dizziness, sedation, nausea, vomiting, and sweating. These effects seem to be more prominent in ambulatory patients and in those who are not experiencing severe pain. In such individuals, lower doses are advisable. Some adverse reactions in ambulatory patients may be alleviated if the patient lies down.

Other adverse reactions include:

Nervous System. Euphoria, dysphoria, weakness, headache, agitation, tremor, uncoordinated muscle movements, severe convulsions, transient hallucinations and disorientation, visual disturbances. Inadvertent injection about a nerve trunk may result in sensory-motor paralysis which is usually, though not always, transitory.

Gastrointestinal. Dry mouth, constipation, biliary tract spasm.

Cardiovascular. Flushing of the face, tachycardia, bradycardia, palpitation, hypotension (see Warnings), syncope, phlebitis following intravenous injection.

Genitourinary. Urinary retention.

Allergic. Pruritus, urticaria, other skin rashes, wheal and flare over the vein with intravenous injection.

Other. Pain at injection site; local tissue irritation and induration following subcutaneous injection, particularly when repeated; anti-diuretic effect

DOSAGE AND ADMINISTRATION

For Relief of Pain

Dosage should be adjusted according to the severity of the pain and the response of the patient. While subcutaneous administration is suitable for occasional use, intramuscular administration is preferred when repeated doses are required. If intravenous administration is required, dosage should be decreased and the injection made

very slowly, preferably utilizing a diluted solution. Meperidine is ineffective orally than on parenteral administration. The dose of DEMEROL should be proportionately reduced (usually by 25 to 50 percent) when administered concomitantly with phenothiazines or many other tranquilizers since they potentiate the action of DEMEROL.

Adults. The usual dosage is 50 mg to 150 mg intramuscularly, subcutaneously, or orally, every 3 or 4 hours as necessary.

Children. The usual dosage is 0.5 mg/lb to 0.8 mg/lb intramuscularly, subcutaneously, or orally up to the adult dose, every 3 or 4 hours as necessary.

Each dose of the syrup should be taken in one-half glass of water since if taken undiluted, it may exert a slight topical anesthetic effect on mucous membranes.

For Preoperative Medication

Adults. The usual dosage is 50 mg to 100 mg intramuscularly, subcutaneously, 30 to 90 minutes before the beginning of anesthesia.

Children. The usual dosage is 0.5 mg/lb to 1 mg/lb intramuscularly or subcutaneously up to the adult dose, 30 to 90 minutes before the beginning of anesthesia.

For Support of Anesthesia

Repeated slow intravenous injections of fractional doses (eg, 1 mg/mL) or continuous intravenous infusion of a more dilute solution (eg, 1 mg/mL) should be used. The dose should be titrated to the needs of the patient and will depend on the premedication and type of anesthesia being employed, the characteristics of the particular patient, and the nature and duration of the operative procedure.

For Obstetrical Analgesia

The usual dosage is 50 mg to 100 mg intramuscularly or subcutaneously when pain becomes regular, and may be repeated at 1- to 3-hour intervals.

OVERDOSAGE

Symptoms. Serious overdosage with meperidine is characterized by respiratory depression (a decrease in respiratory rate and/or tidal volume, Cheyne-Stokes respiration, cyanosis), extreme somnolence progressing to stupor or coma, skeletal muscle flaccidity, cold and clammy skin, and sometimes bradycardia and hypotension. In severe overdosage, particularly by the intravenous route, apnea, circulatory collapse, cardiac arrest, and death may occur.

Treatment. Primary attention should be given to the reestablishment of adequate respiratory exchange through provision of a patent airway and institution of assisted or controlled ventilation. The narcotic antagonist, naloxone hydrochloride, is a specific antidote against respiratory depression which may result from overdosage or unusual sensitivity to narcotics, including meperidine. Therefore, an appropriate dose of this antagonist should be administered, preferably by the intravenous route, simultaneously with efforts at respiratory resuscitation.

An antagonist should not be administered in the absence of clinically significant respiratory or cardiovascular depression.

Oxygen, intravenous fluids, vasopressors, and other supportive measures should be employed as indicated.

In cases of overdosage with DEMEROL tablets, the stomach should be evacuated by emesis or gastric lavage.

NOTE: In an individual physically dependent on narcotics, the administration of the usual dose of a narcotic antagonist will precipitate an acute withdrawal syndrome. The severity of this syndrome will depend on the degree of physical dependence and the dose of antagonist administered. The use of narcotic antagonists in such individuals should be avoided if possible. If a narcotic antagonist must be used to treat serious respiratory depression in the physical dependent patient, the antagonist should be administered with extreme care and only one-fifth to one-tenth the usual initial dose administered.

HOW SUPPLIED

For Parenteral Use

Detecto-Seal™ — Carpuject® Sterile Cartridge-Needle Unit — 2.5 percent (25 mg per 1 mL) NDC 0024-0324-02, 5 percent (50 mg per 1 mL) NDC 0024-0325-02, 7.5 percent (75 mg per 1 mL) NDC 0024-0326-02, and 10 percent (100 mg per 1 mL) NDC 0024-0328-02 all in boxes of 10.

Each cartridge is only partially filled based upon product volume to permit mixture with other sterile materials in accordance with the best judgment of the physician.

Uni-Amp™ — 5 percent solution: ampuls of 0.5 mL (25 mg) NDC 0024-0361-04, 1 mL (50 mg) NDC 0024-0362-04, 1½ mL (75 mg) NDC 0024-0363-04, and 2 mL (100 mg) NDC 0024-0364-04 all in boxes of 25; and 10 percent solution, ampuls of 1 mL (100 mg) NDC 0024-0365-04 in boxes of 25.

Uni-Nest™ — 5 percent solution: ampuls of 0.5 mL (25 mg) NDC 0024-0371-04, 1 mL (50 mg) NDC 0024-0372-04, 1½ mL (75 mg) NDC 0024-0373-04, and 2 mL (100 mg) NDC 0024-0374-04 all in boxes of 25; and 10 percent solution, ampuls of 1 mL (100 mg) NDC 0024-0375-04 in boxes of 25.

Vials — 5 percent multiple-dose vials of 30 mL NDC 0024-0329-01 and 10 percent multiple-dose vials of 20 mL NDC 0024-0331-01 all in boxes of 1.

Note: The pH of DEMEROL solutions is adjusted between 3.5 and 6 with sodium hydroxide or hydrochloric acid. Multiple-dose vials contain metacresol 0.1 percent as preservative. No preservatives are added to the ampuls or CARPUJECT Sterile Cartridge-Needle Unit.

For Oral Use

Tablets of 50 mg, bottles of 100 (NDC 0024-0335-04) and 500 (NDC 0024-0335-06); Hospital Blister Pak of 25 (NDC 0024-0335-01) 100 mg, bottles of 100 (NDC 0024-0337-04) and 500 (NDC 0024-0337-06); Hospital Blister Pak of 25 (NDC 0024-0337-02).

Syrup, nonalcoholic, banana-flavored 50 mg per 5 mL teaspoon, bottles of 16 fl oz (NDC 0024-0332-06).

Revised May 1988

OW-551

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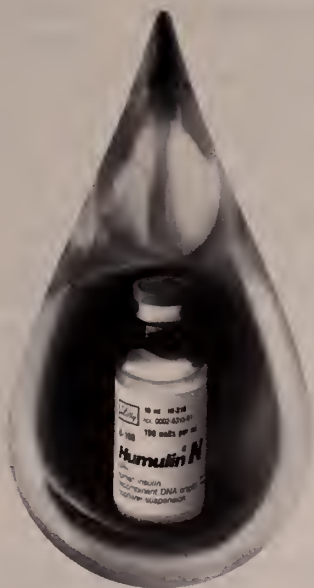
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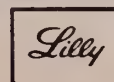


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Frank Cochran

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ORIGINAL PAPERS

Health Care Workers' Knowledge and Attitudes Concerning AIDS

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ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS) has become a major area of concern for the health care industry and society as a whole. Harris¹ proposed that the virus which caused AIDS had infected approximately 900,000 individuals in this country and the rate of growth is expected to increase. The total number of AIDS cases will be large enough to place a severe burden on the health care system as well as society at large. Green, Singer, and Wintfield² predicted that by 1991, 12,831 hospital beds in the United States will be occupied by AIDS patients, more than by lung cancer patients or automobile accident victims. Scitovsky and Rice^{3,4} estimate that personal medical care costs in current dollars will rise to \$8.5 billion in 1991.

Various myths, attitudes, and opinions have developed concerning AIDS.⁵ In a study of physicians, Kelly et al⁶ found that their harsh attitude judgments were associated with AIDS patients, and the physicians were much less willing to interact even in routine conversation when the patient's illness was identified as AIDS. Richardson et al⁷ in a survey of physicians found that most of those surveyed believed that special clinics staffed by physicians who have a particular expertise in caring for AIDS patients should be established. This survey also in-

This paper reports the results of a study performed to address the many unresolved issues concerning health care workers and their treatment of patients with AIDS. A survey was developed to measure knowledge, attitudes and opinions, and other information of health care workers. The survey was administered to all employees of a 200 bed hospital. The authors provide a description of the study, indicating methods, subjects, and procedures. They report that the study identified problem areas in the educational/training of participants. According to the authors, the study indicates that there will be no AIDS-related staffing problems in health care organizations in the future. Additional findings concerning AIDS and health care workers are reported.

dicated a lack of medical knowledge and expertise regarding the opportunistic infections and cancers that are associated with AIDS. Gruson⁸ and *Medical World News*⁹ conclude that the myths, attitudes, and opinions developed concerning patients with AIDS have caused these patients to be stereotyped by health care professionals. Studies have shown how people were categorized by physicians, resulting in health

From the School of Business, Delta State University (Bailey, Johnson and Starkey), and the School of Business Administration, University of Mississippi (Kellogg).

care workers' perceiving that all AIDS patients are alike and should be treated the same. These perceptions lead to prejudice and discrimination of these patients.

Valenti and Anarella¹⁰ found that misperceptions about the transmissibility of AIDS and concern over what types of infection control precautions are necessary have been reported in hospitals across the country. There have been incidents in which employees have quit their jobs rather than care for a person with AIDS or work with a person who has AIDS. These misperceptions may be due to a lack of education, training, and proper information concerning AIDS. Blumenfield et al¹¹ also found a need for further development of medical and nursing education programs in a study of nurses. Two-thirds of the responding nurses reported that they had friends or family members express concern about associating with hospital personnel who have contact with AIDS patients. Other questions showed that between one fourth and one-half of the nurses have a fear of caring for homosexual men and male prisoners, that one-half of the nurses believed that AIDS can be transmitted due to contact with patients despite precautions, and one-half of those responding indicated they would ask for a transfer if they had to care for AIDS patients on a regular basis.

Cummings, Rapport, and Cummings¹² stress that there is a need for staff education and physicians/staff cooperation to ensure appropriate patient care and adequate staff report. Schobel¹³ concludes that it is the responsibility of management to provide adequate education and resources, and to enforce the appropriate rules to ensure the safety of all patients and care providers where AIDS is concerned. The Bureau of National Affairs¹⁴ provides guidelines for the treatment of AIDS patients. These guidelines contend that employers should establish an education program to make sure employees are aware of these procedures. OSHA has begun to set standards for those who care for infectious disease patients and levy fines for noncompliance.

AIDS and its impact on the health care industry is clearly an important area of concern for managerial professionals in this industry. Health care workers' attitudes, knowledge, opinions, and education/training should be carefully studied so that changes in present policies and programs can be made in an attempt to increase the quality of care givers to people and to improve the efficient operation of the health care industry. Many of the studies cited in this review have focused on particular segments of the health care industry (physicians, nurses, etc.).

The results of the study reported in this paper are based on a survey of all employees in a health care facility, thus providing results that are more generalized in nature. The authors were interested in three basic areas. First, the degree to which health care workers were concerned by potential exposure to the AIDS virus. Second, we were interested in the impact that knowledge and sources of information had on health care workers' attitudes and opinions about AIDS. Finally, we wanted to measure health care workers' attitudes about treating AIDS victims. The last area was of interest based on the idea that a potential staffing problem might occur if a significant number of health care workers refused to care for AIDS patients.

Methods

One week prior to a hospital's in-service education program on AIDS, a survey was administered to all employees at a 200-bed, county-owned rural hospital. The instrument, which was developed from reviewing a collection of various surveys concerning AIDS provided by health departments from around the country, was divided into four sections. Section one of the survey was designed to measure the health workers' general and work-related knowledge concerning AIDS. The section included 24 questions that could be answered true, false, or not sure. For analysis, a correct response was coded +1, an incorrect answer was coded -1 and a not sure was coded 0. Thus respondents could score between -24 and +24 in terms of knowledge. Section two contained a series of questions that measured the respondents' attitudes and opinions towards AIDS. This section consisted of 14 questions, six that were general in nature and eight that were work-related. The respondents were asked to answer each question on a five-point scale ranging from strongly agree (1) to strongly disagree (5). Section three included 12 questions concerning occupational information. These included information about:

1. Employees' years of service
2. Times employees cared for an AIDS patient
3. Educational programs attended on AIDS
4. Resources for information about AIDS for employees
5. Types of education provided for employees on AIDS
6. Educational techniques for learning about AIDS
7. Questions on infection control policies
8. Questions on employees concern for exposure to AIDS.

Section four of the survey gathered employees' demographic information such as: age, sex, marital status, education level, and position.

The survey was administered to 350 employees (77.7% female and 17.8% males) with an average age of 39.623 years (range 17 to 74). Of the respondents, 65.3% were married and 21.9% were single. The average number of years worked in the health care profession was 11.548 years. Twenty percent of the respondents were college graduates. Thirty-four percent reported a high school degree or less. The remainder (36.8%) had either a vocational degree or some level of college education. The survey was distributed without regard to position based on the assumption that every employee could possibly come in contact with an AIDS patient. The employees were instructed to complete the surveys anonymously and to return them to their supervisors at the end of their working shifts. Surveys were collected after a three-day period. The response rate for this survey was 69%.

Concern of Exposure

Only 36.9% of the employees indicated that they were concerned about exposure to AIDS. As might be expected, of the employees expressing concern about being exposed to the disease, the largest number provide direct patient care and had frequent face-to-face contact with patients. The people in this category were registered nurses, licensed practical nurses, nurses' aides, anesthetists, and ambulance drivers. The employees' ages and years of service had no effect on their being concerned that they had been exposed to AIDS. The employees that expressed concern that they might have been exposed to the AIDS virus also exhibited fear that they might catch AIDS from performing their job duties. Ironically, the employees' concern about being exposed to AIDS was not affected by their attitudes and opinions toward treating all patients, their attitudes about physical contact with AIDS patients, and the likelihood that they would refuse to care for someone who had the AIDS virus. Employees' knowledge of the disease did affect their willingness to work with AIDS patients in spite of their "significant other's" concern about their contact with AIDS patients at work. The employees' knowledge of the disease also affected their concern for exposure to the virus through their social contacts and knowing members of high risk groups, even though only about 25% of the employees surveyed indicated having such social contacts.

These findings suggest that health care administrators should provide additional training, beyond

that which is required for all employees, to those employees that provide direct patient care. This action will reduce their fear that they may catch AIDS from performing their job duties. The employees' disregard for their "significant other's" concern for their contact with AIDS patients at work indicate that the majority of employees are dedicated to provide health care to all patients even when it conflicts with family roles.

Information Sources/Relationship to Attitudes

The relationships between the employees' attitudes and opinions and their knowledge about AIDS were consistent. The results indicated that the more knowledgeable the employees were about AIDS the less harsh and prejudicial they were. Basically, the more knowledgeable employees were less likely to think that people with AIDS should be quarantined to protect the public health, less likely to believe that people who contracted the disease through sexual behavior or IV drug use deserved their disease, and less likely to suggest that people who are infected with the AIDS virus should be banned from working in banks, stores, restaurants, and other similar jobs where AIDS victims have brief contact with other people.

The more knowledgeable the employees were the more confidence they have in scientists' statements that AIDS can't be transmitted through casual contact. However, even knowledgeable employees did report not always feeling comfortable touching and giving care to patients with AIDS. In addition, the more knowledge the employees have about AIDS, the more that they expressed fear of exposure from performing their job duties. Finally, the more knowledge the employees have, the more confidence they have in training programs for caring for AIDS patients. This suggests that training programs can increase knowledge and that workers have confidence in training programs, but workers still maintain a fear of contracting the disease. All of these findings suggest that training programs designed to increase employees' knowledge concerning AIDS should have a generally positive impact. Knowledgeable employees would be less likely to suffer from the paranoia of dealing with AIDS patients on a casual basis. In addition, they would gain general confidence in the training provided as their knowledge increases. Those directly involved in treating AIDS victims, even though knowledgeable and well-trained, still seem to have a very healthy respect for the disease.

Administrators may be interested in one seeming contradiction in the results concerning how em-

ployees believe hospitals should deal with staff members with AIDS. The more knowledgeable the employees the more they tended to disagree with the statement that hospitals should be allowed to terminate workers who have AIDS. At the same time, they disagreed with the statement that health care workers who have the AIDS virus should be allowed to continue their employment. This seeming contradiction points out the difficulties hospital administrators will face when dealing with employees who have AIDS. On one hand the employees are concerned that the rights of the victim be protected, but they are still convinced that the individual should not continue employment when he/she might infect others.

Employees' knowledge about AIDS was found to be related to their marital status and education level. As expected, those employees with at least some graduate education exhibited a higher level of knowledge, closely followed by those with college degrees, high school degrees, and some high school education. Surprisingly, employees' age, gender, position or years of service had very little impact on their knowledge about AIDS. Another important finding was that eighty-three percent of the employees indicated that the hospital provided educational programs, yet, university- and school-sponsored programs had the only significant impact on their overall knowledge about AIDS. The form of training most significantly related to knowledge was workshops and seminars. While 87% of the employees surveyed indicated an awareness of hospital-wide infection control policies on the care of AIDS patients, such awareness was not correlated with employees' knowledge about AIDS. However, the results of the survey indicated that the employees' use of the infection control manual when seeking information about AIDS did influence their knowledge of AIDS even though the employees selected as important sources of information the following: infection control person (73.6%), physicians (59.1%) and AIDS Policies/Infection Control Manual (47.5%).

Results suggest that training programs would have the most impact if focused toward employees with lower education levels. Also, administrators might wish to investigate the strong relationship between university- and school-sponsored programs and employee knowledge. Perhaps techniques, methods, procedures could be transferred to in-house programs to increase knowledge retention. Finally, results suggest the employees need to be trained not only in infection control policies but also given information on why the policies are in effect. The

seemingly important role of the use of the AIDS Policy/Infection Control Manual should be used as a building block for increasing employee knowledge.

Attitudes

The survey asked for employees' attitudes about dealing with AIDS victims as patients and as co-workers. In terms of responses related to dealing with AIDS victims as patients, the results were split. Forty-five percent felt that health care workers should not be allowed to refuse care to AIDS patients, 25 percent expressed no opinion, and 30 percent felt that they should have the right to refuse care to AIDS victims. This suggests that there is a fairly significant division of opinion on how to deal with AIDS victims. As more victims enter the system, hospitals will have to deal with the potential schism which may develop between those who believe they should be able to refuse to deal with AIDS victims and those who believe it is their duty to deal with those patients. If workers are required to deal with AIDS victims, the potential for turnover among 30 percent of the workforce could be devastating. Training should focus on developing a more positive attitude among the minority of employees who believe they should be allowed to refuse care to AIDS victims.

Results concerning attitudes toward employees testing positive were mixed and sometimes contradictory. This only points out the difficulties the health care industry may face when more AIDS patients enter the system. Generally employees felt that hospitals should not be allowed to terminate workers who have AIDS (39%) but that health care workers who have AIDS should not be able to continue their employment (46.1%), and that hospitals should be able to screen out potential employees if they test positive for AIDS (51.8%). Obviously, the split opinions will only create problems for hospital administrators as they try to develop policies for dealing with employees who develop AIDS. While the authors do not offer solutions, administrators should begin to develop a plan for dealing with these treatment and employment issues.

Summary

This study's findings report information which may be of interest to the administration and staffs of health care facilities in their dealings with AIDS victims. Some of the findings may be quite different from what one might expect given the situation. A review of the more interesting findings are listed below:

1. Employees' concern for exposure to AIDS was not affected by attitudes and opinions toward their treatment of all patients, physical contact with AIDS patients, and their refusal to care for someone who has the virus.
2. Although hospitals provided most of the educational programs on AIDS to employees, universities and schools sources had a significant effect on knowledge about AIDS.
3. Seminar and workshop training methods had the most effect on knowledge about the virus.
4. Employees' use of Infection Control Manual and its effect on knowledge about AIDS was very strong. Employees who used Infection Control Manual as a source of information had much higher knowledge scores.
5. The relationship between the employees' knowledge about AIDS and their expression of fear and safety in the treatment of AIDS patients still exists despite the training they have received.
6. The mixed results on whether employees would refuse to care for AIDS patients, while at the same time showing evidence that they would tend to be in favor of working with someone who is tested positive for the AIDS virus.

The findings of this study also provide information to the administration of hospitals in the area of education and training of their employees about AIDS and the effects of many types of the program techniques that are most commonly employed. Finally the results indicate that there could be future staffing problems in health care facilities as the number of AIDS patients continues to rise if employees' opinions remain deeply divided. Many

problems face health care facilities in their treatment of AIDS patients, and much research is still needed.

The authors realize that certain limitations exist concerning this study. One limitation is that the survey was administered to a relatively small, rural hospital thus its findings may not be generally applicable to all health care facilities. An additional limitation is that only a small percentage of the participants had cared for a patient diagnosed as having AIDS. Finally, no extensive tests for validity and reliability were performed on the survey administered. However, the authors feel that the results of this study are quite useful because of its exploratory nature.

There are several areas which require further investigation. The primary area which we feel should be addressed concerning health care facilities is that of education/training programs. We propose that additional studies should be directed toward this critical area. It is clear that improvements in the education/training area is vital to insure adequate care for all patients. These steps will also help insure a safer working environment for all health care employees. ★★★

Acknowledgement

The authors would like to thank Noel Hart, Administrator, Joan Taylor, Head of Nursing, and the Staff of Bolivar County Hospital for their cooperation in this study.

References

References will be supplied upon request. Address all requests to: C. E. Kellogg, Management and Marketing Department, School of Business Administration, University of Mississippi, University, MS 38677.



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Large Cell Carcinoma of the Lung With Isolated Jejunal Metastasis

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Jackson, Mississippi

THE OCCURRENCE OF SMALL BOWEL metastasis of bronchogenic carcinoma is sufficiently rare as to warrant close scrutiny. When this situation recently occurred on our Thoracic Surgery Service, a literature search revealed only three reported cases of clinically significant metastatic bronchogenic carcinoma to the small intestine.

Midell and Lochman¹ reported a 62-year-old man with a large nonresectable "undifferentiated giant cell carcinoma" of the right lower lobe who developed peritonitis two months following lobectomy. At laparotomy, perforation of the ileum at the site of a metastasis was found. The patient died in the immediate postoperative period.

Wootton et al² reported a 65-year-old man with an 8.5cm mass in the left lower lobe who prior to thoracotomy developed signs of peritonitis. At the time of emergency laparotomy, a perforated 8cm tumor of the jejunum was found 22cm from the ligament of Treitz. Approximately 44cm from the ligament of Treitz a second 8cm was found. Both tumors were resected and found to be squamous cell carcinoma. Six weeks after bowel resection, left lower lobectomy was accomplished and pathologic diagnosis was also squamous cell carcinoma. He did well initially, but expired ten weeks following left lower lobectomy.

Morgan et al,³ reported a 36-year-old man found to have a nonresectable "anaplastic carcinoma" of his left lung. He received chemotherapy and six months later developed abdominal pain and was found to have free peritoneal air on x-ray. At lap-

Isolated small bowel metastasis of bronchogenic carcinoma is so distinctly unusual that only three previous case reports have been located. The authors report the case of a 59-year-old white male, who succumbed due to complications of a jejunal metastasis two months after left upper lobectomy for large cell carcinoma. The diagnosis was suspected preoperatively on the basis of a CT scan.

arotomy, a perforation of a 7 by 5cm tumor in the jejunum was found approximately two feet distal to the ligament of Treitz. The small bowel tumor was diagnosed as a small cell anaplastic carcinoma identical with the bronchial tumor. The patient expired seven weeks after the bowel perforation occurred.

Due to extreme rarity of clinically significant metastatic bronchogenic carcinoma to the small intestine, we elected to report herein the fourth case.

Case Report

This 59-year-old white male was admitted to the Jackson VA Medical Center April 19, 1987, with a five day history of cough productive of gray sputum. Past history revealed that he had a colon resection for diverticulitis in 1985 with a large incisional hernia thereafter. He had a greater than 80 pack-year history of smoking. Physical examination revealed the patient was obese, and there were rales and rhonchi at the left base. Chest x-ray showed a solitary pulmonary nodule of the left upper lobe and severe chronic obstructive pulmonary disease. A CT chest scan confirmed a 1.7cm rounded soft tissue

From the University Medical Center and Veterans Administration Medical Center (Dr. Dalton, Simon, and Gatling). Dr. Koury is a resident in thoracic surgery at the University Medical Center, Jackson, MS.

nodule in the left upper lobe. There were no mediastinal nodes, and no other lesions were noted. He refused fiberoptic bronchoscopy and surgery.

He returned to the outpatient department on December 15, 1987, and a chest x-ray showed the mass in the left upper lobe to measure 4.5cm. He was

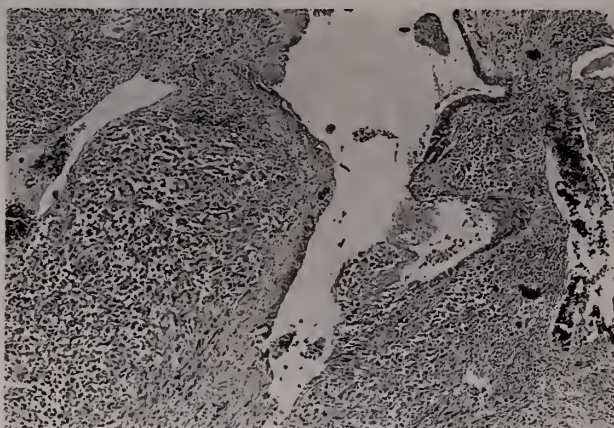


Figure 1. Large cell bronchogenic carcinoma surrounding a bronchus. H & E Stain X 100.

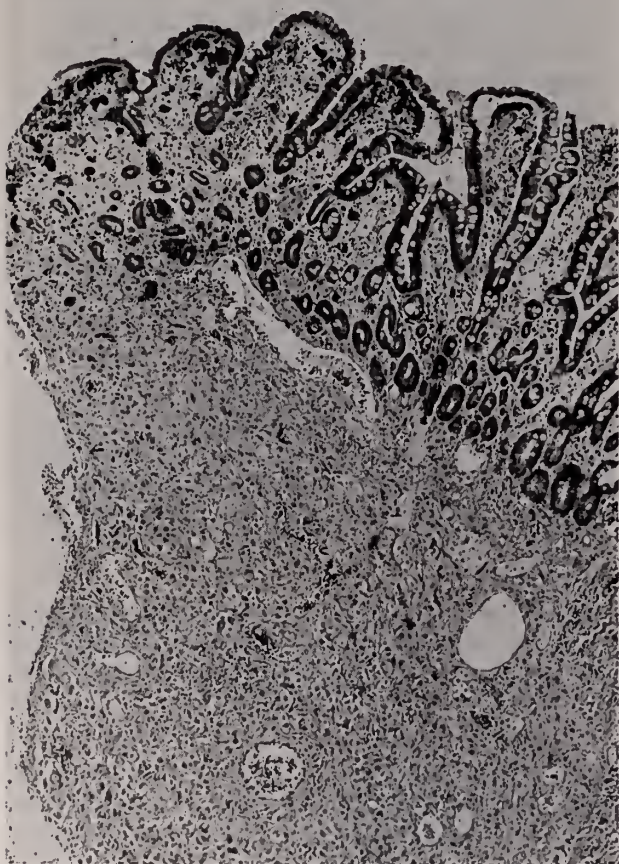


Figure 2. Small bowel with metastatic large cell carcinoma filling the submucosa underlying benign mucosa. H & E Stain X 100.

readmitted January 26, 1988. Pulmonary function tests showed an FEV1 of 1.7, with essentially equal function in each lung on split crystal lung scan. Fiberoptic bronchoscopy revealed no lesions and the sputum was Class II. Bronchial biopsy was unremarkable. Liver enzymes were normal. Because of varying abdominal complaints, a CT scan of the abdomen was obtained which showed a possible liver metastasis. A liver-spleen scan showed no evidence of liver metastasis. A CT directed needle aspirate of the solitary pulmonary nodule produced a pathologic diagnosis of "consistent with squamous cell carcinoma." The patient elected to return for surgery at a later date.

On March 4, 1988, left upper lobectomy was accomplished for a large mass with minimal pleural adhesions. The pathologic report was as "large cell undifferentiated carcinoma" (see Figure 1). The bronchial and hilar nodes were negative for metastases, and the patient was staged as T-3, N-0, M-0. In the post-operative period, he initially did quite well. Prolongation of air leak due to severe emphysema delayed chest tube removal until the 10th postoperative day. The following day he developed ileus which failed to respond to nasogastric suction, and x-ray showed small bowel distention. This resolved spontaneously, but because of varying abdominal distention, upper GI series, barium enema, and proctoscopy were done and were negative. On March 28, he developed recurrent supraventricular tachyarrhythmias and Verapamil was added after cardiology consultation. Finally, Esmolol was required to control his rapid heart rate. Ileus returned and a repeat CT scan of the abdomen showed a 5cm mass in the mid-abdomen. Aspiration revealed a thin odorless yellow fluid, which was negative on Pap smear and Gram stain. Because of his symptoms and the presence of mass, laparotomy was performed on April 4, 1988. After taking down adhesions, a 5cm mass was noted in the proximal jejunum approximately 1½ feet (50cm) from the ligament of Trietz. There was no evidence of any other intraperitoneal metastases. The mass was resected with an end-to-end anastomosis of the jejunum, and the diagnosis was "metastatic large cell carcinoma with mesenteric abscess" (see Figure 2). The small bowel metastasis was identical with the primary bronchogenic carcinoma (see Figure 3 and 4). He became ventilator dependent and a tracheostomy was performed. The patient never developed any evidence of additional metastases during the postoperative period. He succumbed to pulmonary, renal and septic complications on May 14, 1988. Post-mortem examination was not allowed.

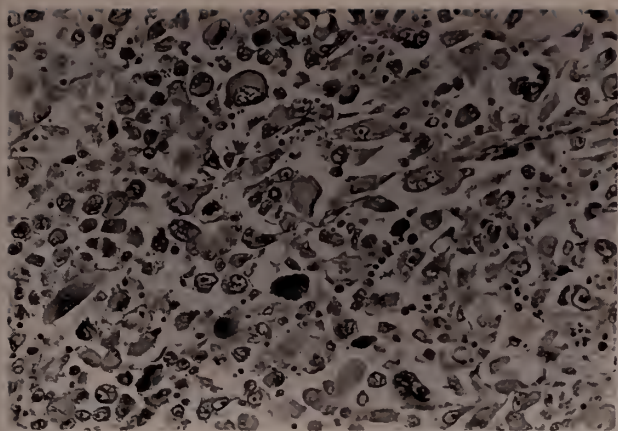


Figure 3. Large cell bronchogenic carcinoma. H & E Stain X 400.

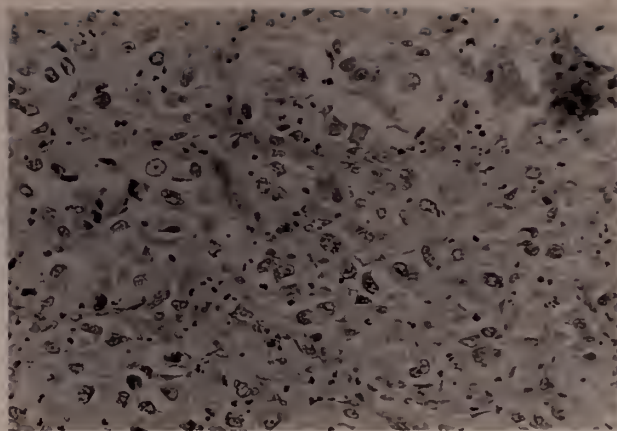


Figure 4. Small bowel metastasis large cell bronchogenic carcinoma. Compare with Figure 3. H & E Stain X 400.

Discussion

Although clinically significant small bowel metastases of bronchogenic carcinoma are extremely rare, small bowel metastases are found at autopsy in patients dying of lung cancer. In the monumental treatise on 5,000 lung cancer patients, by Watson,⁴ 676 patients came to autopsy. Of this group, 42 (6.27%) had small bowel metastases which were not clinically significant. Although 147 patients died of peptic ulceration or hemorrhage, no deaths were attributable to small intestinal metastatic disease.

Clinically significant metastatic disease from bronchogenic carcinoma portends a generally poor outlook. As was the case with our patient who survived only two months, the three previously reported cases also had a short survival after the diagnosis was confirmed. In each case urgent laparotomy was carried out because of peritonitis, ileus, or evidence of gastrointestinal perforation. In

our case the patient had prolonged intermittent ileus with evidence of a mass on CT scan. This is the first case in which the diagnosis was suspected pre-operatively on the basis of a CT scan. It would seem that although small bowel metastases of bronchogenic carcinoma are found relatively frequently at autopsy, their rare occurrence clinically denotes a much graver prognosis than usual. ★★★

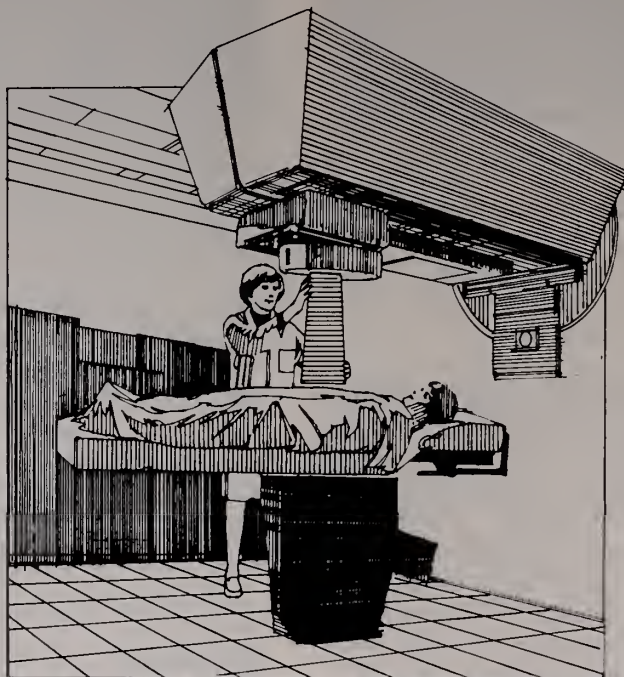
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Carcinoma In Situ and T-1 Squamous Cell Carcinoma of the Glottis: The Mississippi Baptist Medical Center Experience

R. ARNOLD SMITH, JR., M.D.

MYRON W. LOCKEY, M.D.

Jackson, Mississippi

CARCINOMA OF THE LARYNX is one of the most common head and neck neoplasms, representing 1.5% of all cancers. It presents as a clinically varied process ranging from a velvety red area on the free margin of one vocal cord to a bulky exophytic process occupying large amounts of the superior and inferior surfaces of both cords. Early stage squamous cell carcinoma of the glottis can be cured with either radiation therapy or surgery. Surgery may consist of laser vaporization of surface lesions, local excision often with laser, cord stripping, cordectomy or laryngectomy. Because cure usually results from any of these modalities, optimal treatment must be determined by the modality with the highest rate of cure, the most satisfactory preservation of normal voice quality, and the least cost to the patient in time and money. At the Mississippi Baptist Medical Center (MBMC) primary treatment for most patients with early invasive vocal cord cancer has been radiotherapy, while the initial treatment of carcinoma in situ is more varied. This report is to review the overall institutional experience and to specifically analyze surgical, radiotherapeutic, and combined control rates as well as voice quality resulting from different treatment options.

Methods and Materials

All 63 cases of squamous cell carcinoma confined to the vocal cords or anterior commissure which have presented to MBMC during the six-year period from the inception of our tumor registry in January

This report is a retrospective analysis of 62 patients treated for early glottic carcinoma during the six-year period of January 1982 through December 1987. The authors report that the cancer has been controlled in 100% of patients. For invasive stage 1 tumors the radiation cure rate is 42 of 45 patients or 93%, and voice quality after treatment was usually normal. Surgically treated tumors are usually confined to one vocal cord. Primary surgery with laser or cord stripping ultimately led to tumor control and voice preservation in all eleven patients treated although two required salvage with radiotherapy and mild but acceptable hoarseness was a usual sequel.

of 1982 until December of 1987 are included in this analysis. All follow-up data was obtained and verified through the MBMC tumor registry. A total of 57 patients have been followed for at least two years after diagnosis, and all patients for a minimum of 16 months. No patients were lost to follow-up. Patient distribution by age and sex can be found in Table 2. Patients were staged primarily according to the 1983 AJCC staging system (See Table 1). The substaging of AJCC stage 1 was after Mandenhall et al.¹ An analysis of initial treatment by stage is presented in Table 3. All radiation therapy patients were treated with megavoltage equipment using the following beams: Cobalt Co⁶⁰ (44) and 6 MEV X-Ray (1). All patients were treated with a continuous course of therapy and two lateral op-

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posing fields treated once daily. Field sizes by collimator setting range from 5×5.5 (27.5 square centimeters) to 7×7 (49 square centimeters), with an average 36.6 centimeters or approximately 6×6 centimeters. The full dose plateau of these fields must be reduced by $\frac{1}{2}$ cm on all lateral margins due to the characteristic penumbra of cobalt beams and the convention of defining collimator setting at the 50% isodose line. Only two patients were treated with fields smaller than 30 square centimeters. With the exception of a single patient, all patients were treated using wedge filters to obtain a more uniform dose distribution. Neck contours were generally obtained using a plaster cast, and computer assisted treatment plans were then formulated and optimized to avoid dose excesses or dose inadequacies. Because of the normal keel-like shape of the thyroid cartilage and adjacent structures, the dose distribution of bilateral opposing fields is inhomogeneous and suboptimal without special effort to compensate for this contour irregularity. The tumor dose was specified to a volume that would encompass the tumor with a two $1\frac{1}{2}$ to 2 cm margin as determined by computer generated dosimetry, most commonly designated at the 96% of maximum isodose line. The frequency of daily radiation fraction sizes, the total dose employed at that daily fraction rate, and the failure rate for the fraction sizes are described in Table 4.

TABLE 1
EARLY GLOTTIC STAGING SYSTEM EMPLOYED

T1 - Non invasive carcinoma (carcinoma in situ)
T1 - Invasive carcinoma without fixation
T1a Involvement of one vocal cord only with or without anterior commissure involvement
T1b Involvement of both vocal cords

TABLE 2
AGE AND SEX AT PRESENTATION

<i>Sex:</i>	
Male	- 57 or 90%
Female	- 6 or 10%
<i>Age:</i>	
under 44	- 1 or 2%
50-59	- 12 or 19%
60-69	- 31 or 49%
70-79	- 18 or 29%
80-	- 1 or 2%

All patients had at least $\frac{3}{4}$ centimeter of light field fall off anteriorly. Patients' fields were positioned using simulator and external landmarks and extended from thyrohyoid membrane above to cricoid cartilage below.



Figure 1. Illustration showing a tumor of the right mid vocal cord (at left) and (at right) the type of laser excision appropriate for its removal.

TABLE 3

NUMBER OF PATIENTS TREATED (FAILURES OF INITIAL TREATMENT) BY STAGE AND PRIMARY TREATMENT MODALITY

Stage	Radiation Therapy ± Stripping	Laser	Excision by Cord Stripping	Radical Surgery	Radical Surgery with Radiation Therapy
TO (CIS)	2(1)	2(1)	2(1)	0	0
T-1a	29(1)	7(1)	2(2)	1(0)	1(0)
T-1b	15(2)	1(0)	1(0)	0	0

The Sharplan CO₂ laser model 743 by Laser Industries Ltd. was placed in service at this institution in February of 1983. This instrument has been used to treat nine T1a and one T1b glottic cancers during the time interval under analysis. An illustration of the type of resection which may readily be performed with this instrument appears in Figure 1.

Results

There were no deaths from glottic cancer or from the treatment of cancer. No one is known to have currently active disease. Twelve patients have died of unrelated causes, three of lung cancer and nine of nonmalignant disease. Patients developing recurrence and interval to recurrence are described in Table 4. One patient with excision as primary treatment recurred as a T2 lesion with this classification based on restriction of cord movement. This patient remains cured after 6160 cGy at 220 cGy/day to limited fields. A second patient initially treated with laser was recurrent after only a two month interval and remains cured after salvage with 5500 cGy at 220 cGy/day.

Laser controlled six of seven T1 lesions initially and was used successfully as salvage for the recurrent disease in the only failure after initial laser excision. A survey of voice quality was obtained of eight patients treated with laser primarily and of 17 initially irradiated T1a patients who could be reached for analysis. The results of this voice quality survey reveal that 14 of 17 irradiated patients have normal voice, while only two of seven patients with invasive squamous cell cancer treated by laser remain completely normal, although voice quality was usually deemed by the patients to be satisfactory. The results of this voice quality survey can be seen in Table 6.

Discussion

There is a major conceptual realization gaining force in the radiobiological understanding of head and neck carcinoma. This realization is that a daily dose rate of 180-200 cGy are suboptimal for pro-

TABLE 4

REVIEW OF DOSE AND FRACTIONATION PARAMETERS EMPLOYED IN IRRADIATED PATIENTS

# Patients	Daily Dose (cGy)	Total Dose	# Failed
1	200	6000	0
8	210	6072-6630	0
14	220*	5500-6380	4
23	225†	5625-6075	0

* 7 patients to 5500 cGy; 4 patients to 6160 cGy; 2 patients to 6380 cGy

† 13 patients to 5850 cGy; 8 patients to 6075 cGy

ducing cure in virtually all squamous cell carcinoma sites of the head and neck excepting only lymphoepithelioma of the nasopharynx. With both localized and systemic cytotoxic approaches intensity of treatment has become a major concern, as the direct relationship of intensity to tumor cure has become more clearly defined. With radiotherapy for head and neck squamous cancer a much more effective dose rate than 200 cGy per day resulting in a 15% increase in cure rates² for most advanced tumors is 220-240 cGy per day, five days per week.

There have been many attempts to lessen the acute morbidity of intense treatment schedules with such strategies as lessening the daily fraction size or providing gaps ("rests") during the course of treatment. All these morbidity lessening techniques lessen the cure rate as well. The hard lesson learned by all this clinical research is that the lining membranes of the upper aerodigestive pathway and their derived carcinomas share a common radiosensitivity, and only by treatment regimens severely toxic to mucous membrane surfaces can optimal tumor destruction be obtained. Any intentional or unintentional delays (such as machine down time) degrade cure probability. Far better is it to take analgesics and suffer a severely sore throat for two months than to require laryngectomy for radiation failure.

While the University of Florida¹ reported a 93% control rate for irradiated T1 cancer, they recognized a significantly increased rate of recurrence

TABLE 5
ANALYSIS OF RECURRENCES BY STATE, INTERVAL TO RECURRENCE AND SALVAGE TREATMENT

<i>Date of Diagnosis</i>	<i>Initial Stage</i>	<i>Initial Treatment</i>	<i>Recurrence Date</i>	<i>Recurrence Treatment</i>	<i>Interval to Recurrence</i>
3/82	T-1b	XRT	6/82	Laryngectomy	3 mo
11/82	CIS	XRT	2/84	Hemilaryngectomy	15 mo
12/86	T-1b	XRT	10/87	Laryngectomy	10 mo
8/87	T-1a	XRT	3/88	Laryngectomy + Node Dissection	7 mo
3/85	T-1a	Stripping	6/86	Laser	15 mo
6/85	CIS	Stripping	9/86	Stripping	15 mo
7/85	T-1a	Stripping	7/86	XRT	12 mo
8/85	T-1a	Laser	2/88	Laser	30 mo
6/87	CIS	Laser	8/87	XRT	2 mo

TABLE 6
VOICE QUALITY ASSESSMENT AFTER TREATMENT

	<i>Treatment Modality</i>	<i>Total Treated (patients surveyed)</i>	<i>Normal Voice</i>	<i>Slightly Impaired</i>	<i>Noticeably Hoarse</i>	<i>Seriously Hoarse</i>
T-0	laser*	2(1)	1	0	0	0
T-1a	laser*	7(1)	2	3	1	0
T-1b	laser	1	0	1	0	0
T1a	radiotherapy +	29(17)	14	2	1	0

* One laser treatment patient had expired and one had been irradiated for salvage.

+ Eight patients expired, one had radical surgery before treatment, one had laryngectomy for recurrence, and two could not be reached.

with bilateral lesions, these lesions being controlled only 76% of the time at doses of 6100-7000 cGy even with large fractions. Our cure rate of 12/14 or 86% with T1b lesions is clearly worse than the control rate of 28/29 or 97% with T1a lesions. Both T1b failures received 6160 cGy at 220 cGy/day.

To safely administer dose rates of 225-240 cGy per day for more advanced head and neck tumors requiring much larger fields, twice daily hyperfractionation and intensive nutritional support must be employed. Single large daily doses with large fields cause severe late toxicity to connective tissue with an unacceptable incidence of edema, fibrosis, and necrosis if radical dose levels are reached. Twice daily hyperfractionation circumvents this problem. With early vocal cord lesions one treatment daily has tolerable acute and late phase toxicity because of the limited size of the field. The radiological explanation for acceptable tolerance in relatively small glottic laryngeal fields receiving large daily fractions is that necrosis and other late phase morbidity is clearly directly related to the total volume of tissue irradiated to a potentially dangerous dose.

At MBMC T1 larynx carcinoma was treated to

6000 cGy in six weeks for several years ending 1974, and then to 7000 cGy in seven weeks between 1974 and 1980. While the cure rate seemed to marginally improve with higher total dose as had been described in the literature, one patient had a serious necrosis with attempted surgical salvage, and the merits of this high dose schedule became increasingly questionable. In 1981 there was a transition to the University of Florida schedule advocated by Dr. Rodney Million¹ of 225 cGy daily up to a dose of close to 6000 cGy. We believe this change was critical in improving the cure rate and allowed this improvement in cure rate while still preserving adequate soft tissue reserve for low risk surgical salvage procedures.

We continue to believe that cobalt energy offers reassuring back scatter and dose distribution characteristics in the air containing volumes around the larynx. Cobalt machines are generally more reliable than linear accelerators with less risk of major treatment interruption which might significantly degrade treatment intensity. The vulnerability of linear accelerations to down time becomes an increasingly troublesome problem with higher energy machines.

We continue to believe that cobalt beams properly modified by compensating filters are the optimal energy for T1 larynx treatment, and we believe that this report is compatible with that position.

Total dose is also a major source of controversy in radiation therapy. In 1981 Princess Margaret Hospital in Toronto, Canada, published an influential paper³ recommending 5500 cGy in five weeks, and stating that total dose over the range of 5500 to 7000 cGy had no relation to control rate with T1 larynx carcinoma. The rate of tumor control with 5500 cGy was, however, only 86% as opposed to 89 and 93% in large series from the M.D. Anderson Hospital⁴ and the University of Florida,¹ institutions where the fraction size was not only larger than 200 cGy per day, but the total dose was generally in excess of 6000 cGy. It is now a well established fact that dose increments of 300-500 cGy make significant changes in control rates for many sites of head and neck squamous cell carcinoma. A comparison of the results described here with other published reports is found in Table 6. We support the conclusion of Dr. Million and associates¹ that a dose-effect relationship can be discerned.

At the request of one referring physician we treated seven patients with 5500 cGy in five weeks and one of these patients with a diagnosis with carcinoma in situ failed requiring hemilaryngectomy. There were 22 patients treated at 225 cGy per day and none failed.

The University of Florida¹ has recommended a relatively high dose of 6300-6525 cGy in T1b lesions because their data supports increasing cure rates as a function of dose time trend in four of seven subgroups of glottic cancer studied, and their failures were much more common with the bulkier tumor masses characteristic with the T1b substage. Since two of our four recurrences were in patients treated to below this range and since Florida had 0/86 moderate to severe complications in the 6000-6600 cGy dose range at 225-255 cGy/dose, we are planning to use slightly higher total doses at this institution in the future for T1b lesions. Our one significantly hoarse patient (see Table 6) with a radically irradiated T1a lesion also received the highest dose 6600 cGy and the margin for maintaining excellent voice quality and producing cure may be fine at the higher dose levels under consideration here.

We believe that surgical and radiotherapeutic management of T1 glottic cancer has improved significantly in the last decade. Data here presented suggests a cure rate rise from 85% to 93% with radical radiotherapy is reliably possible and we look

TABLE 7
LITERATURE REVIEW OF RADIATION THERAPY
CONTROL RATES

<i>Institution</i>	<i>T1 Cases Primarily Treated</i>	<i>Ultimate</i>	
		<i>Local Control*% Control*%</i>	<i>Local Control*% Control*%</i>
Princess Margaret Hospital ³	333	86	n.d.
M. D. Anderson Hospital ⁴	332	89	98
U. of Maryland ⁶	86	92	99
U. of California at San Francisco ⁷	183	80	97
U. of Florida ²	184	93	97
Harvard ⁸	723	90	n.d.
MBMC (present series)	44	93	100

*No exclusions

n.d. = No Data

upon this data as further significant support to the conclusion reached by Million et al¹ that the schedule they devised is superior. We believe the University of Florida fractionation schedule represents a significant advance in glottic cancer treatment, just as twice daily hyperfractionation² seems to be a significant advance for more advanced cancer.

T1b glottic lesions are a treacherous group and must be treated more aggressively since a large percentage of T1 glottic radiation failures are attributable to the more advanced T1b substage.¹ It also seems appropriate to begin consideration of the merits of 120 cGy twice daily hyperfractionation in bulky T1b lesions to more effectively dissociate acute phase tissue (glottic mucosa and its derived carcinomas) damage and late phase tissue (cartilage, blood vessel, etc. of mesothelial origin) damage, thereby allowing safe delivery of large daily total doses and higher totals. With major partial resection of both vocal cords, voice quality usually deteriorates unacceptably, limiting the practicality of surgical approaches for bulkier lesions.

With cure rates of greater than 90% and normal voice quality in most patients radiotherapy must continue to be the standard against which other treatments are measured. Early vocal cord cancer may be cured with surgical techniques like the CO₂ laser,^{9, 10} but suitable lesions must be relatively small and some compromise of voice quality usually follows the use of this technique (see Table 6). The results here with laser therapy are encouraging, and the judicious use of laser for small, well-localized T1a lesions should be considered if tumor removal can be accomplished with minimal structural damage to the vocal cord. Certainly the treatment can be accomplished more swiftly. Three of five pa-

tients treated with cord stripping required treatment for recurrence, but two of these were controlled by salvage surgical techniques. (See Tables 3 and 5) Even though the frequency of primary treatment failure was clearly higher with laser or cord stripping, and the tendency for less advanced lesions to be treated surgically is apparent.

In many areas of medicine the treatment alternatives continue to expand rapidly. The management of early larynx cancer is no exception to this general rule. The authors hope the preceding discussion will assist the clinician in decisions concerning the not uncommon early laryngeal cancer.

★★★

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Acknowledgements

The authors wish to express appreciation to Pam Barlow and the other members of the MBMC Department of Quality Assurance and to Alice McCelleis, Department of Radiation Therapy, MBMC, for their efforts at data collection.

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THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

Washington Impressions

THE Mississippi State Medical Association and the Mississippi Political Action Committee recently sent a large delegation of physicians and their spouses to the American Medical Association's Political Education Forum in Washington, D.C. In addition to some very fruitful and, I think, informative interaction with our congressional delegation, we all experienced two days of rather intense and specific instruction concerning medical and health care issues in the U.S. Congress.

After our visit, I tried to think of a word or a phrase or even several words that might describe my initial impressions of Congress and of the law-making process. The word that came to my mind that I could not shake from my thoughts was "failure."

The word failure seemed to arise when we looked at the apparent irresponsibility of our Congress in facing the enormous budget deficit. It is well recognized that if households or businesses were run the way the government is run, we would be in pitiful shape. A household or business would probably be bankrupt. The Congress has failed to address the federal budget deficit, and this failure to demonstrate responsible statesmanship was reinforced on October 5, 1989. While we were in Washington, the House of Representatives repealed the one-year-old Catastrophic Care law. The Catastrophic Care bill was one that would help a small, but very significant and very needy segment of our population. This was a bill that we, as a medical society and as organized medicine, supported because it was self-financed. Those who would receive the care would pay for it without additional taxation. It would require additional financial burden on a very small number of upper income individuals. The reasons given for repeal by the House of Representatives members was "mailroom breakdown," (a bureaucratic term that means a lot of mail). This was orchestrated by a small number of elderly activists who obviously did not fully understand anything except that they wanted benefits free (a free lunch). It seems to me that the present generation of elderly — above all others — should understand that one never gets anything of quality for nothing.

As I dwelled a little bit longer on the failure theme, I was reminded that our government is a representative form of rule and that people elect lawmakers to

(Continued on page 374)

Physicians Receiving Reproach For Compliance with Policies

At a recent workshop the chairman of the committee responsible for advising Congress on health affairs made the following statement, "The problem is that no matter what we do, physicians find ways of getting around the system; for example, we want global billing — a single charge for a service rendered, whereas physicians have found that by fragmenting charges, breaking a service rendered into component parts and submitting a separate charge for each part, the total fee for that service is greater." This statement was inaccurate and inappropriate. Physicians are not responsible for starting the practice of fragmenting charges. This has been the policy of the Medicare intermediary since the early 1970's.

In 1972 I submitted a claim for a "Combined Resection of the Neck, Jaw and Tongue." Payment was denied because "There was no such listing in the *California Relative Value Studies*," used at that time by the intermediary. At a conference with the Medicare intermediary representative, I was told in no uncertain terms that "the problem centered around the fact that I did not know how to bill for what was done." I was advised to follow the guidelines established in the *California Relative Value Studies*, 1969 Edition, Page 29, titled "Surgical Modifier — 50" which instructs the surgeon to break a multiple or bilateral procedure into component parts, selecting one as the primary procedure, for which a full charge is submitted, and a 50% charge for each secondary procedure. I followed their instructions and the claim was fragmented into "Radical Neck Dissection, Hemimandibulectomy, Hemiglossectomy and Tracheotomy. The total was twice the amount of the original claim; yet it was promptly paid, and I was instructed to submit all future claims in that manner. This has continued to be the policy of the intermediary since that time.

Recently this also has become the policy of the intermediary regarding office claims as well as sur-

gery. It is now mandated that office charges be fragmented before they will be paid. I can no longer submit an office charge for "Evaluation of Dizziness." Instead, I must fragment the bill into general exam, vestibular test, audiogram, positional test, etc.

Physicians are forced to comply with the new coding regulations under threat of monetary penalties, loss of Medicare privilege, and imprisonment. At the same time the intermediaries are under no such restriction.

On a recent occasion the diagnosis of the patient's illness was not found in the coding book and the intermediary was called as to the proper steps to take in submitting the claim. I was advised "to select the nearest thing to what the patient had and submit a claim for that." This inappropriate response reflects the total lack of understanding of the part of those administering the programs. The really sad part is that eight to ten years from now computer printouts of this data will be used by some committee to structure future regulation.

The increasing complexity of submitting claims appears based on the premise that all physicians are dishonest and, therefore, are the cause of the problems within the system. For years physicians tried to cope with the system and manage their own claims. However, the increasingly complex coding and claim submission regulations have forced physicians to hire consultants, advisors and business managers. In contrast to physicians, the regulators have the full-time responsibility of studying, dissecting, and using the system for maximum benefit of their employer. This, in turn, leads to even more regulations, and the circle goes on, getting tighter all the time.

It was truly disturbing to hear the chief adviser to Congress place the blame for this type billing on physicians, and therefore, bring on more regulatory changes.

MYRON W. LOCKEY, M.D.
Editor

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YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon[®] is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants; or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

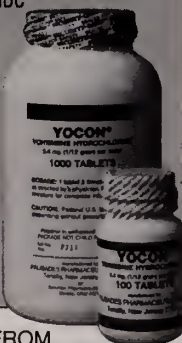
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon[®] 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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PRESIDENT'S PAGE

(Continued from page 372)

represent their views. For a congressman or a senator to be out of step with the direction of the "mail room" might be political suicide.

The realization then struck me, that perhaps we are the failure. We are the part of the system that has broken down — we who don't regularly relay to our representatives our ideas and solutions to problems that plague our patients and the American health care system; we who don't get actively involved in the political process; we who don't support the candidates who share our views and values with donations, suggestions, and yes, education concerning the issues.

Our impressions of the Mississippi congressional delegation was one of respect and admiration. We, as a group of Mississippi physicians and spouses, were most impressed with our congressmen's desire to understand health care issues better and to adequately address our concerns. It was generally felt by the majority of us on the trip that we needed to keep our congressional delegation much better informed concerning the issues that are dear to our hearts. It is our responsibility as a medical association and as individuals to keep them better informed. This should also become the predominant charge of our Council on Legislation and our MPAC Board. We have not done this as well as we should have.

Therefore, I urge each of you to join MPAC/AMPAC. I encourage you to become actively involved in a political campaign. Be sure that your family and your office staff are registered and vote. Communicate your views to your legislators, congressmen, or senators regularly. Invite your congressman's health adviser to spend a typical day with you in your practice. I am totally convinced that political activity can make a difference.

"Take part or get taken apart." "Attend to the business of politics or you may have no business to attend to" — because of a "mailroom breakdown."

MEDICAL ORGANIZATION

MSMA Staff Changes Announced

MSMA Executive Director Charles L. Mathews announced several changes in the administrative staff last month.

William F. (Bill) Roberts has rejoined the MSMA staff in a new position of Assistant Executive Director and General Counsel. Roberts has been on the staff of the American Medical Association for several years, serving as Legislative Counsel in the AMA's Washington office and more recently as Director of the Division of Medical Society Relations in the AMA's Chicago office. Roberts formerly was chief lobbyist for MSMA.

Clare Elliott has been named Director of Legislative Activities. She has been on the MSMA staff since 1987, serving as Assistant Director of Governmental Relations. Bucky Murphy, formerly Director of Governmental Relations, resigned from the MSMA staff in October to pursue private business interests.

Other staff members include: Davis Richards, Assistant Executive Director and Controller; Jackye Wiebelt, Director of Member Insurance Programs; Patsy Silver, Director of Communications and Specialty Services; Barbara Shelton, Director of Membership and Auxiliary Services; Lora Lane, Coordinator of Service Programs; and Kay Gatewood, Coordinator of Secretarial Services.

Support staff includes: Robert Kidd, Assistant Controller; Lucy Spence, Secretary/Bookkeeper; Tammy McGarrh, Secretary/Receptionist; and (in the MSMA Benefit Plan and Trust) Debbie Wright, Assistant to the Administrator; Scott Shappley, Marketing Representative; Pam Brantley, Secretary; Paige Shelton, Clerk; and Debra Collins, Kathy Stringer, and Debbie Cannon, Claims Adjustors. David Lowe, a student at Millsaps College, has recently joined the MSMA staff as Mail Clerk.

MSMA Members Receive Physician's Recognition Award

Twelve MSMA members were named recipients of the AMA Physician's Recognition Award during the period July-September 1989. They are: Drs. Gloria Jean Butler of Port Gibson; Bertin C. Chevis

of Bay St. Louis; Robert Franklin Cooper of Oxford; Walter E. Dawkins of Natchez; Alan E. Freeland of Jackson; Donald K. Gaddy of Gulfport; Ben J. Kitchings of Long Beach; Robert H. Middleton of Biloxi; Paul H. Moore of Pascagoula; William Joseph Preau of Moss Point; Cynthia K. Undesser of Brandon; and Terry E. Westbrook of McComb.

Physicians can receive the PRA certificate valid for one, two or three years. For a one-year award, physicians report 50 hours of continuing medical education, including 20 hours of Category 1; for the two-year award, physicians report 100 hours of CME, including 40 hours of Category 1; and for the three-year award, physicians report 150 hours of CME, 60 of which are Category 1.

MSMA Honors Dr. Guyton At CMS Meeting



Dr. Norman C. Nelson, UMC vice chancellor for health affairs, presented a resolution of appreciation to Dr. A. C. Guyton during Central Medical Society's October meeting. The resolution was passed by MSMA House of Delegates in June, as a tribute to the retiring Dr. Guyton.

Alcorn County Medical Society Honors Dr. J. T. Davis



MSMA Executive Director Charles Mathews, left, was among guests at a reception honoring Dr. and Mrs. J. T. Davis of Corinth, at right. The reception was held by Alcorn County Medical Society in recognition of Dr. Davis' retirement from the practice of medicine and as a tribute to his many contributions to the profession and the community.

UNC Announces Faculty Appointments

Five have been named in faculty appointments in the Schools of Medicine and Nursing and center-wide at the University of Mississippi Medical Center for the current academic session.

Dr. Norman C. Nelson, UMC vice chancellor for health affairs, announced the appointments following approval by the Board of Trustees of State Institutions of Higher Learning.

School of Medicine appointments were Dr. Rajinder K. Arora, assistant professor of pediatrics and

director of pediatric intensive care; Dr. Holly H. Peeples, instructor in family medicine; and Dr. Thomas S. Roberts, assistant professor of orthopedic surgery.

In the School of Nursing, Mandaville N. Bower was named associate professor of nursing.

Centerwide, Dr. Susan E. Wellman was appointed assistant professor of pharmacology and toxicology.

Dr. Arora attended Hans Raj College at the University of Delhi, India, and earned the MBBS in 1974 at Maulana Azad Medical College at the University of New Delhi. He took his internship and residency at Irwin Hospital in New Delhi, followed by a residency at Louisiana State University Medical Center, and fellowships at Tulane University Medical Center, Children's Hospital of Pittsburgh and Children's Hospital of Michigan. He has been on faculty at the University College of Medical Sciences in New Delhi and at the Children's Hospital of Michigan, and on the clinical faculty of Louisiana State University Medical Center and the Medical College of Ohio. He was in private practice in pediatric-pulmonary and critical care medicine at Maumee, Ohio before coming to the Medical Center.

Dr. Peeples earned the BA in biology and the BA in French, summa cum laude, in 1979 at Ole Miss and the MD in 1984 at the University of Mississippi Medical Center, where she took her internship and completed her residency in family medicine prior to her appointment to the Medical Center faculty.

Dr. Roberts earned the BA summa cum laude in 1978 at Louisiana Tech University and the MD in 1982 at Louisiana State University. He took his internship and residency at the University of Arkansas for Medical Sciences at Little Rock followed by a fellowship at LSU in knee and sports medicine.

Ms. Bower earned the BSN in 1955 at the University of Virginia and the MSN in 1974 at the Medical Center. She has been on the nursing staff at Bedford Memorial Hospital in Virginia, the Medical College of Virginia, University of Virginia Hospital and the University of Mississippi Medical Center, where she was assistant professor of nursing from 1974-1986. She has been a staff nurse at Mississippi Baptist Medical Center since 1988.

Dr. Wellman earned the BS in 1976 at the University of North Carolina at Chapel Hill and the PhD in 1986 at Florida State University. She took her postgraduate training at the University of Mississippi Medical Center, where she was a National Institutes of Health postdoctoral fellow since 1987.

Gilmore Memorial Scholarship Presented to Nursing Student



Dr. William Henderson, left, chief of staff at Baptist Memorial Hospital-North Mississippi, and Mrs. Eula Gilmore, center, talk with Denise Clement, recipient of the James O. Gilmore Memorial Nursing Scholarship. The award is given by the medical staff of the hospital to an outstanding student of the Oxford area who is enrolled in the bachelor of science registered nursing program at the University of Mississippi School of Nursing in Jackson. (Photo by Bruce Newman of The Oxford Eagle.)

Review A Book

The following books have been received by the JOURNAL MSMA. Members of MSMA interested in reviewing one of these volumes should address requests to the Editor. After submitting a review for publication, you may keep the book for your personal library.

Health Risks and the Press: Perspectives on Media Coverage of Risk Assessment and Health. Mike Moore, Editor. The Media Institute, Washington, DC and The American Medical Association, Chicago, IL. \$12.95. 1989.

Guide to Clinical Preventive Services: An Assessment of the Effectiveness of 169 Interventions. (Report of the U.S. Preventive Services Task Force). Michael Fisher, Editor. Williams & Wilkins, Baltimore. 1989.

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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 24-28, 1990, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 122nd Annual Session, May 30-June 3, 1990, Jackson. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, July 25-28, 1990, Gulf Shores, AL. Leontine Stevens, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. H. S. Barrett, Secy., P.O. Box 1810, Gulfport 39501. Counties: Hancock, Harrison, Stone.

Delta Medical Society, 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSoto County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Enrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Granada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. David H. Irwin, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. D. Winn Walcott, Secy., 2173 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Jack Hollister, Secy., P.O. Box 9000, Columbus 39705. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. John J. McClosky, Secy., 3003 Short Cut Rd., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society, 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Wayne M. Pitre, Secy., 1202 Mission Park Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials of the Accreditation Council for Continuing Medical Education (ACCME)" and the Council on Medical Education of the MSMA. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

Council on Scientific Assembly Mississippi State Medical Association 735 Riverside Drive Jackson, MS 39202	Golden Triangle Regional Medical Center 2520 Fifth St., North Columbus, MS 39701
North Mississippi Medical Center 830 Gloster Street Tupelo, MS 38801	Northwest Mississippi Regional Medical Center Hospital Dr. Clarksdale, MS 38614
Forrest General Hospital Mamie Street and Highway 49 South Hattiesburg, MS 39401	North Panola County Hospital I-55 at Highway 315 Sardis, MS 38666
Mississippi Baptist Medical Center 1225 N. State Street Jackson, MS 39202	Singing River Hospital 2809 Denny Ave. Pascagoula, MS 39567
Gulf Coast Community Hospital 4642 W. Beach Boulevard Biloxi, MS 39531	Magnolia Hospital Alcorn Drive Corinth, MS 38834
Jefferson Davis Memorial Hospital Sergeant Prentiss Dr. Natchez, MS 39120	Greenwood Leflore Hospital 1401 River Rd. Greenwood, MS 38930
King's Daughter Hospital Highway 51 N. Brookhaven, MS 39601	Gulfport Memorial Hospital 4500 13th Street Gulfport, MS 39501
Charter Hospital of Jackson Lakeland Drive Jackson, MS 39208	Oxford-Lafayette County Hospital Highway 7, South Oxford, MS 38655
Biloxi Regional Medical Center 150 Reynoir St. Biloxi, MS 39533	St. Dominic-Jackson Memorial Hospital 969 Lakeland Dr. Jackson, MS 39216
Jeff Anderson Regional Medical Center 2124 14th St. Meridian, MS 39301	Delta Medical Center 1400 E. Union Greenville, MS 39704
Mercy Regional Medical Center 100 McAuley Dr. Vicksburg, MS 39180	Methodist Hospital 5001 W. Hardy St. Hattiesburg, MS 39401

PERSONALS

VINOD K. ANAND of UMC presented a course at the American Academy of Otolaryngology/Head and Neck Surgery meeting in New Orleans.

DUDLEY S. BURWELL of Biloxi has been certified by the American Board of Orthopaedic Surgery.

GEORGE BUSH of Laurel was installed as president of the Mississippi Academy of Family Physicians. JAMES STINGILY of Pascagoula was named president-elect.

GEORGE L. CAIN announces the opening of his practice of family medicine at Corinth Medical Center.

C. RON CANNON of Jackson was co-author of a paper published by Year Book Medical Publishers.

ROBERT COLTHARP of Hattiesburg was inducted as a fellow of the American Society for Head and Neck Surgery in San Francisco.

DAWSON B. CONERLY of Hattiesburg has announced his retirement as medical director of the Lowery A. Woodall Outpatient Surgery Facility.

BRYAN COWAN of UMC spoke to the Vicksburg Ob-Gyn Society and lectured at Providence Hospital's continuing education meeting in Detroit, Michigan.

SURESH CHINTAMONENI announces the opening of his practice of general surgery at Community Medical Center at 307 West Dewey Street in Lucedale.

ROBERT CULPEPPER has been appointed residential program director of CPC Sand Hill Hospital in Gulfport and has opened his office for the practice of psychiatry at Oak Lane Professional Center in Orange Grove.

C. RALPH DANIEL III of Jackson made several presentations on nail disorders at a symposium sponsored by Columbia University in New York.

SUMAN DAS of UMC presented papers at the World Congress of Surgery in Toronto, Ontario, Canada.

JAMES R. DAY has associated with Infants, Children and Adolescent Clinic, 804 Garfield Street in Tupelo, for the practice of pediatrics.

OWEN EVANS of UMC spoke at the Vicksburg Pediatricians and Family Practitioners meeting.

RICHARD J. FIELD, JR. of Centreville spoke at a meeting of the New Mexico Chapter of the American College of Surgeons in Albuquerque.

MARGARET M. GLYNN has associated with the Street Clinic in Vicksburg for the practice of pediatrics.

WALTER GOUGH of Drew has been recertified as a diplomate of the American Board of Family Practice.

BARNEY J. GUYTON of Tupelo was speaker at a seminar on colon cancer sponsored by the North Mississippi Medical Center.

ARTHUR GUYTON of UMC presented a paper at a symposium at Johns Hopkins University Medical School in Baltimore.

VALEE HARISDANGKUL of Jackson spoke at a meeting of the Central Mississippi Chapter of the Lupus Foundation of America.

DONNA HARRINGTON has associated with Tupelo Neurology Clinic, 609 Brunson Drive, for the practice of neurology.

GEOFFREY HARTWIG of Hattiesburg spoke on Alzheimer's disease at a meeting of the Covington County Nursing Center Family Council.

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PERSONALS/Continued

HARDY HENDERSON has joined the staff of Hattiesburg Clinic and will practice at the Immediate Care Center.

JACK HUDSON of Laurel spoke on cholesterol at a health education program sponsored by Forrest General Hospital in Hattiesburg.

MICHAEL JABALEY of Jackson delivered the Second Annual Richard J. Smith Memorial Lecture at the annual meeting of the American Society for Surgery of the Hand in Seattle, Washington.

R. RAY LYLE of Starkville has been named to the state advisory board for supervision of child care facilities.

RICK MARTIN of UMC was guest lecturer for grand rounds at Tulane University Medical Center in New Orleans.

ROBERT MCBROOM of Pascagoula spoke on nicotine addiction at a meeting of Stay Stoppers, a support group for ex-smokers.

CONNIE MCCAA of UMC spoke at the Mid-South Regional Cornea Study in Hot Springs, Virginia.

JOHN J. MCGRAW has associated with Laurel Bone and Joint Clinic for the practice of orthopaedic surgery.

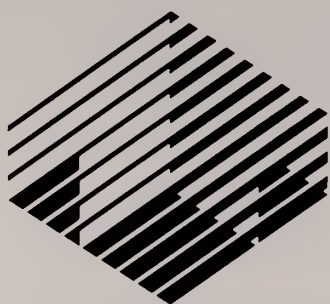
FRANCIS MORRISON of UMC served as coordinator for the National Blood Resource Education Program in Washington, DC.

JOHN MORRISON of UMC spoke at a FDA meeting in Washington, DC, lectured during a postgraduate course at the University of Cincinnati Medical Center, and spoke at a meeting of the Ob-Gyn Society in Dallas, Texas.

MARGARET L. PARRISH has associated with the Hattiesburg Clinic for the practice of neurology.

ROBERT RHODES of UMC gave grand rounds at the VA Medical Center in Cincinnati, Ohio, during a visiting professorship at the University of Cincinnati. He also spoke at a meeting of the Cincinnati Surgical Society.

DOUG ROUSE of Hattiesburg has been appointed to the board of counselors of the Southern Orthopedic Association.



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HENRY J. SANDERS of McComb has been appointed to the Technical Advisory Committee for Optometric Services, a panel of the state Medicaid program.

CAROL SCOTT-CONNER of UMC was inducted into the International Society of Surgery at its meeting in Toronto, Canada.

CLINTON SMITH of Jackson spoke at meetings of the Rotary Club in Clarksdale and Lions Club in Cleveland.

ROBERT SMITH of Jackson recently was honored by Goodwill Industries for his participation in the volunteer agency.

G. V. SMITH of Grenada spoke on cancer at a meeting in Winona which was sponsored by the American Cancer Society and Tyler Holmes Hospital.

BILL SPRAGINS of Hollandale was honored by co-workers and citizens of the Hollandale and Greenville areas upon his retirement from the practice of medicine.

ROBERT R. SURRATT of Jackson was honored by Mississippi State Hospital upon his retirement after 33 years as consulting radiologist.

ED THOMPSON of Jackson was elected president of the American Diabetes Association, Mississippi Affiliate, at its annual meeting.

RALPH VANCE of UMC spoke at a meeting of the Clarksdale chapter of the American Cancer Society.

WILLIS WALKER of Hattiesburg has been named medical director at the Lowery A. Woodall Out-patient Surgery facility.

JAMES K. WASSERMAN has associated with Gulf Oaks Hospital and has opened his office for the practice of psychiatry at 900 Robinson Avenue in Ocean Springs.

MILLARD WILBANKS has opened his office for the practice of gastroenterology at 1409 East Union Street in Greenville.

ANN R. WOODBRIDGE has opened her office for the practice of obstetrics and gynecology at 1037-A North Flowood Drive in Jackson.

EUGENE WOOD of Jackson was named Doctor of the Year by the Mississippi Academy of Family Physicians.



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Medico-Legal Brief

Civil RICO Verdict Against Abortion Protesters Upheld

Anti-abortion protesters may be liable under the Racketeer Influenced and Corrupt Organizations Act for their activities in interfering with an abortion clinic's activities, a federal appellate court for Pennsylvania ruled.

A women's health clinic filed suit against the anti-abortion activists for disrupting the clinic's business and injuring its property by harassing the clinic's clients and employees, unlawfully entering its property, and destroying and damaging medical equipment. A jury found a RICO violation on a pattern of extortionate acts.

On appeal, the activists claimed that RICO did not apply to their actions because they were motivated by their political beliefs. Noting that the jury's award of damages was based on destruction of the clinic's medical equipment during one of the four incidents of forcible entry into the clinic, the court said that the activists' activities went beyond mere

dissent and publication of their political views.

The court said that there was sufficient evidence of economic injury and of the activists' attempts to force the clinic out of business. The court remanded the case to the trial court for entry of an appropriate injunction. — *Northeast Women's Center, Inc. v. McMonagle*, 868 F.2d 1342 (C.A.3, Pa., March 2, 1989)

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References should be limited to a maximum of 10. If there are more than 10, the references will be omitted and a notation made to write the author for a complete list. Textbooks, personal communications, and unpublished data may not be cited as references. References must include names of authors, complete title cited, name of journal or book spelled out or abbreviated according to the *Index Medicus*, volume number, first and last page numbers, month, date (if published more frequently than monthly), and year. References should be arranged according to order listed in the text and must be numbered consecutively.

Manuscripts accepted for publication are subject to copy editing. Authors will receive galley proof prior to publication. Galley proof is only for correction of errors, and text changes

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RECOLLECTIONS

Twenty years ago, JOURNAL MSMA reported that the American Board of Family Practice had announced plans to give its first certification examinations in various centers throughout the U.S.

Another news story in that issue (November 1969) noted that the University of Mississippi School of Medicine had increased its faculty to a record of 155. There was also an account of the opening of the Mississippi Postgraduate Medical Institute at the Medical Center, a concept that had been endorsed by the MSMA House of Delegates at its 100th Annual Session. The Institute was designed for physicians in general practice, and courses were presented with the cooperation of professional and voluntary health organizations. Structure of the course called for attendance at two weeklong intensive refresher courses at the Medical Center each year, 15 hours per year in approved seminars and circuit courses, and 15 hours per year at medical and professional society scientific sessions. Dr.

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William O. Barnett, professor of surgery and chairman of the MSMA Council on Medical Education, was project coordinator. The program comprised 440 hours of study over four years and led to a certificate of excellence in postgraduate education.

Also in the November 1969 issue was an article reporting that Dr. William E. Lotterhos of Jackson had been named president-elect of the American Academy of General Practice. Scientific articles included "Carcinoma of the Esophagus: A Case Report," by Dr. R. E. Netterville, and "Radiographic Differentiation between Renal Cyst and Neoplasms," by Dr. John Y. Gibson of Jackson.

In the November 1979 issue of JOURNAL MSMA, Dr. Gerald Gable, MSMA president, commented on the importance of participating in voluntary efforts to contain health care costs. He noted that physicians should make themselves aware of costs of procedures, tests and medications, and he observed, "there are many things that we can do with proper planning and thought to help hold down costs. It is imperative that we do so; because if we don't, the chairman of the House Ways and Means Subcommittee on Health has already warned that mandatory fee and cost control figures are . . . ready to be implemented."

That same issue outlined the MSMA health legislative proposals, which included: a planned, sequential program of health education for students in grades 1-12; a tax on cigarettes and cigars to fund hypertension and cancer control programs conducted by the State Board of Health; lowering the implied consent law for driving while intoxicated from .15% to .10%. Additional proposals endorsed by MSMA were: funding for existing programs for immunizations, tuberculosis control and venereal disease control; funding for a statewide medical examiner's system; funding for public education and assistance to local communities in installing fluoridation programs; statutory recognition of "brain death"; and passage of other bills to fund the statewide genetic screening program; to increase the ceiling on insurance coverage of emergency transportation for newborns; to increase the State Hospital Commission's per diem for charity patients in community hospitals; and to reduce the required retention time for x-rays in hospitals.

Scientific articles in that 1979 issue included "Noninvasive Diagnosis of Carotid Artery Disease," by Drs. J. H. Holleman and Seshadri Raju of Jackson, and "Transcutaneous Nerve Stimulation: Treating Pain in Athletes," by Dr. Robert F. Cooper and Tim C. Garl of the University of Mississippi.

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JOURNAL

OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION

DECEMBER

1989



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THE JOURNAL OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION (ISSN 0026-6393) is owned and published monthly by the Mississippi State Medical Association, founded 1856, at 735 Riverside Drive, Jackson, Mississippi 39202. Subscription rate, \$25.00 per annum; \$35.00 per annum for foreign subscriptions; \$2.25 per copy, as available. Advertising rates furnished on request. Printed by The Ovid Bell Press, Inc., Fulton, Missouri. Second-class postage paid at Jackson, Mississippi, and at additional mailing offices. POSTMASTER: Send address changes to Mississippi State Medical Association, P.O. Box 5229, Jackson, Mississippi 39216.



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NEWSLETTER

December 1989

Dear Doctor:

MSMA's Leadership Conference is set for January 18 at Jackson's Ramada Renaissance Hotel. The agenda for the day includes presentations on such issues as Medicare reimbursement policies, the prioritizing of Medicaid health services, provision of health care for the growing medically needy population, and various proposals under consideration by the 1990 Congress.

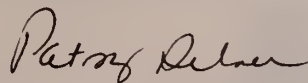
The Leadership Conference also will include a special session of the MSMA House of Delegates, a joint meeting with the Mississippi Hospital Association, and a reception for state legislators. Mark your calendar now, and make plans to attend this important meeting.

MSMA has announced to the Mississippi news media its 1990 Awards for Excellence in Health Reporting. The awards program was recommended by the Council on Public Information and approved by the House of Delegates at the 1989 Annual Session. The program's intent is to recognize reporters whose work has contributed to a better understanding of medicine and health care in Mississippi. The awards will be presented at the 122nd Annual Session in June.

Volunteers are needed to serve as "Doctor of the Day" at the MSMA's Emergency Medical Care Unit at the Capitol during the 1990 Regular Session of the Legislature. Members who have participated in the past have found it to be an interesting experience and a valuable opportunity to talk with lawmakers and to see the legislature in action. To volunteer, call the MSMA office.

REMINDER: The 122nd Annual Session is May 30-June 3, 1990 in Jackson. The scientific program will feature a "Trauma Symposium" and a debate on the cholesterol issue. Plan now to attend.

Sincerely,



Patsy Silver
Managing Editor

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DATELINE

Dr. Guyton To Receive AMA Scientific Award

Chicago, IL - Dr. Arthur C. Guyton will be awarded the AMA's Scientific Achievement Award for 1990. He was nominated for the

award by the MSMA and will be recognized in ceremonies before the AMA House of Delegates at its June 1990 meeting in Chicago. The award, which consists of a \$2,500 stipend and a medallion, was established to recognize an individual for outstanding scientific achievements.

Medicare Workshop Set for January 17

Jackson, MS - The MSMA is conducting a workshop on ICD-9-CM coding and medical necessity documentation and CPT-IV coding

in Jackson on January 17. The workshop is cosponsored by the AMA Department of Practice Management and Travelers Medicare. Registration materials will be in the mail soon, and MSMA members are urged to pass the information along to appropriate office personnel.

Apply Now for Scientific Exhibit Space

Jackson, MS - Applications are now being accepted for scientific exhibit space at MSMA's 122nd Annual Session, which gets

underway May 30, 1990 at the Coliseum Ramada Inn in Jackson. Exhibitors should send a letter requesting scientific exhibit space to MSMA headquarters. Please provide the title of the exhibit, names of all exhibitors and the estimated number of linear feet required.

Physicians Needed For EPSDT Program

Jackson, MS - The MS Medicaid Program is seeking physicians to participate in a new and improved Early and Periodic Screening,

Diagnosis and Treatment Program (EPSDT) for children. Record-keeping has been streamlined, professional fees have been increased, and an additional case manager's fee is provided. For more information, write Medicaid, 239 N. Lamar St., Suite 801, Jackson, MS 39201-1311.

Child Sexual Abuse Workshop Is Planned

Jackson, MS - A workshop on child sexual abuse will be held Feb. 7-9 in Jackson.

"Intervention in Child Sexual Abuse:

Offenders, Victims and Survivors" will feature two nationally recognized speakers who will provide clinical perspectives. Topics include identification, disposition and treatment. For information contact MS Committee for Prevention of Child Abuse, 455 N. Lamar St., Jackson, MS 39202 (969-7111).

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ORIGINAL PAPERS

Update on Street Drugs in Mississippi

DIANE K. BEEBE, M.D.

ELIZABETH WALLEY, M.Ed.

Jackson, Mississippi

DRUG ABUSE continues to be an area of concern for all family physicians. Statistics from the National Council on Alcohol and Drug Abuse report that nearly two-thirds of all high school seniors use an illicit drug at least once before they finish high school, and that four million Americans are current users of cocaine.¹ In fact, cocaine remains at the top of the list of drugs being abused, with drastic increases due to the availability of its new form — crack. Heroin and marijuana also remain popular because of their use with the other drugs. As quoted in the February 9, 1989 *Jackson Clarion Ledger*: “Cocaine is king; its sister, crack, is queen; but LSD and ecstasy also are part of the royal court for drugs preferred by Mississippi students.”

Drug abuse centers across the state report significant increases in substance abuse cases. This increase is felt to be due in part to the new designer drugs such as PCP and ecstasy. These designer drugs are defined as chemically altered derivatives of federally controlled drugs, thus circumventing existing legal restrictions.²

Case Report

B.A. is a 22-year-old previously healthy white female who arrived by ambulance in the emergency

Drug abuse is on the rise in Mississippi. Treatment centers across the state report significant increases in substance abuse cases. Consequently, family physicians must have the most current, accurate information available and the skills with which to treat either an acute crisis or the chronic problems related to drug abuse. The authors present an overview of the clinical presentations and management of some of the most widely used designer drugs: crack, ecstasy and PCP.

room. She was transported from her home where her parents reported finding her on her bed, breathing but unresponsive to their multiple attempts to awaken her.

In the emergency room she was found to be lethargic, responsive only to deep pain. Vital signs revealed a temperature of 104.4° F, rectally, a pulse of 120 bpm with marked irregularity, respirations of 12 per minute and a blood pressure of 170/110 mmHg.

Physical exam revealed her pupils to be of normal size with vertical nystagmus present. They were equally reactive to light. Cardiac auscultation revealed an irregular rhythm with a rate of 120 bpm. No murmur or gallop was heard. Her lungs were

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clear. An abdominal exam was unremarkable. On neuromuscular exam it was noted that she had muscle fasciculations of her upper and lower extremities with muscle rigidity. Her deep tendon reflexes were hyperreflexic at 4+ on a scale of one to four, but without clonus. She had negative Babinski reflexes bilaterally. Cardiac monitoring confirmed a rate of 120-128 bpm with frequent unifocal PVC's and occasional short runs of supraventricular complexes.

Administration of Narcan and dextrose was accomplished by the paramedics on route to the emergency room with no clinical change in the patient's presentation.

This case represents a typical presentation of an acute drug intoxication of one or more of the designer drugs and crack. With the prevalence of designer drug abuse, this patient could present to any Mississippi emergency room. Close attention to her specific history, clinical presentation, and response to initial treatment would enable the physician to recognize which drugs may be involved. Appropriate management may then be instituted. It is essential that health care providers have adequate knowledge of these contemporary drugs of abuse.

Crack

Crack is the smokeable freebase of cocaine and is named for the sound made by the crystals popping when heated. It is also called rock because of its appearance. Street cocaine is usually fifteen to twenty-five percent pure and quite expensive. Crack, on the other hand, may be as much as ninety percent pure and sells for five to ten dollars a vial. It is made by preparing an aqueous solution of cocaine hydrochloride, adding ammonia and baking soda to alkalize the solution, and then heating to precipitate the pure cocaine. Crack is rapidly absorbed and highly reinforcing. It produces a craving more intense than that of IV cocaine.²

Cocaine in any form is a sympathomimetic drug. With acute intoxication, users become tremulous and complain of dizziness and blurred vision. Within minutes they may experience hallucinations of visual "snow lights" or tactile "cocaine bugs." Paranoia and acute psychosis are common and difficult to distinguish from a true schizophrenia, especially in the chronic user. Patients often present with malignant hyperthermia, which is due to stimulation of the heat regulatory center and increased skeletal muscle activity.^{2,3} Hypertensive surges can result in spontaneous intracerebral bleeds, CVAs and aneurysmal ruptures. Acute toxicity can result in convulsions, cardiac arrhythmias, acute left ventricular failure, pulmonary edema and respiratory

arrest. Death can occur as rapidly as two to thirty minutes after ingestion or inhalation. Intoxication is self-limited, with recovery likely in less than twenty-four hours.^{4,5}

In cases of chronic crack abuse, patients experience weight loss, insomnia and depression. Pulmonary symptoms such as chronic cough, dyspnea and hemoptysis are frequently reported.^{2,4,6,7}

Ecstasy

Ecstasy (3,4-methylenediozymethamphetamine), or MDMA, is an analogue of mescaline, a class which includes the amphetamines and methamphetamines. Other street names include Adam, XTC and M & M.⁸ It is generally sold as a yellowish or white pill costing from ten to thirty-five dollars a dose.²

Clinically intoxicated users become euphoric and empathetic, with greatly increased self-esteem. They occasionally experience visual perception alterations, but no true hallucinations. The presentation is as a sympathomimetic with tachycardia, hypertension, hyperthermia, hyperreflexia, agitation and midriasis. Most ecstasy deaths occur soon after intoxication and have been from arrhythmias (supraventricular and ventricular), hyperthermia, disseminated intravascular coagulation, or intracerebral hemorrhage. All underlying diseases can be exacerbated, and delayed deaths are usually from these disease complications or from inadequate gastrointestinal elimination.⁸ Chronic abuse of ecstasy can lead to a paranoid psychosis clinically indistinguishable from schizophrenia. This is usually reversible after a prolonged drug-free state.⁸

PCP

Phencyclidine, the most abused arylhexamine, is commonly called angel dust but may also be hog, mist, T, tic tac or krystals. Originally developed in the late 1950s as an analgesic and anesthetic agent, it was used in veterinary medicine until April, 1979, when all legal manufacture of the drug was stopped.^{2,9}

PCP, like most drugs, has several routes of administration. It is most often smoked with low-grade marijuana, parsley or oregano, but can be snorted with cocaine, or ingested. A liquid form is used for dipping marijuana or tobacco cigarettes. These pre-dipped kools can sell for twenty dollars each.²

PCP's mechanism of action is not well understood, but it has actions similar to the amphetamines and cocaine. Clinical effects of PCP are dose related and the user's desired dose is very close to the toxic dose, generally more than 20 mg. Low doses (2-5

TABLE 1
CHEMICAL DEPENDENCY UNITS LISTED IN THE 1988 DIRECTORY OF ALCOHOLISM &
ADDICTION TREATMENT PROGRAMS

BIENVILLE RECOVERY CENTER (Inpatient) 401 East Beach Boulevard Biloxi, MS 39530 (601) 374-2500	MISSISSIPPI STATE HOSPITAL CHEMICAL DEPENDENCY UNIT (Inpatient) Mississippi State Hospital Whitfield, MS 39193 (601) 939-1221
DELTA MEDICAL CENTER CARE UNIT (PV) (Inpatient) P.O. Box 5247, Crossroads Station Greenville, MS 38701 (601) 334-2200	PINEGROVE RECOVERY CENTER (Inpatient) 2255 Broadway Drive Hattiesburg, MS 39401 (601) 264-0050
GULF OAKS HOSPITAL AND CLINIC (Inpatient and Outpatient) 4645 West Beach Boulevard Biloxi, MS 39531 (601) 388-0600	RESTORE C.D.U. (Inpatient) 129 Jefferson Davis Blvd. P.O. Box 1203 Natchez, MS 39120 (601) 442-3304
LAUREL WOOD PSYCHIATRIC RECOVERY CENTER (Inpatient) Highway 39 North Meridian, MS 39201 (601) 693-3344	SOUTHWEST MISSISSIPPI MH COMPLEX NEWHAVEN HOUSE (Inpatient) 110 Brook-Haven Street P.O. Box 592 Brookhaven, MS 39046 (601) 833-3698
MISSISSIPPI BAPTIST CHEMICAL DEPENDENCY CENTER (Inpatient and Outpatient) 1225 North State Street Jackson, MS 39201 (601) 968-5130	TURNING POINT NORTH MISSISSIPPI MEDICAL CENTER (Inpatient) 830 South Gloster Tupelo, MS 38801 (601) 841-3161

mg) produce mild depression followed by an acute confusional state, euphoria and a feeling of depersonalization accompanied by signs of sympathetic stimulation. Horizontal and/or vertical nystagmus is a common finding at this stage with pupils of normal size. Some authors suggest this to be diagnostic for PCP intoxication. The patient will often present to the emergency room in a coma-like state with open eyes. As the dose is increased, the patient becomes combative and paranoid, often exhibiting magnified strength. Hypertension is one of the earliest signs of acute toxicity and is accompanied by tachycardia, hyperthermia and hyperreflexia.^{2, 8-11}

Doses of 20 mg or more can result in seizures, acidosis, catatonia, coma and respiratory depression or arrest. The catatonia presents a zombi-like appearance. In this stuporous state, myoclonus with muscle rigidity occurs upon stimulation.^{2, 8-11}

Management

For all the drugs mentioned, management of an acute intoxication is supportive in nature. Antidepressants and antianxiolytics should be avoided, es-

pecially during the first twenty-four hours. Verbal reassurance is important.^{8, 11} Stimulation should be kept to a minimum, especially in PCP intoxication.^{11, 12} Gastric lavage and activated charcoal as the first step play a role with any intoxication since delayed gastrointestinal elimination is a major cause of death.^{2, 8}

Frequent monitoring of vital signs is essential. Rectal temperatures should be monitored and hyperthermia treated aggressively with cooling blankets, ice packs, and fans.⁶ Nitroprusside, nifedipine or phentolamine have been recommended for a hypertensive crisis.⁶ Combined alpha and beta blockers or vasodilators are also effective.^{2, 6, 8, 12} In ecstasy intoxication, researchers at the University of Mississippi School of Pharmacy have found chlorpromazine to hasten the restoration of normal vital signs in dogs. Implications for its use in human subjects have not yet been established.¹³ Ventricular ectopy should be treated with beta blockers or lidocaine.⁶ Diazepam is the drug of choice for seizures, while haloperidol is appropriate for an acute psychosis. All drugs used in drug intoxication sit-

uations should be rapid-acting and easily titratable.^{2, 8} The severe craving for cocaine has been treated with several dopamine agonists, including amantadine and bromocriptine.^{2, 13, 14} Acidification of the urine to enhance renal clearance is a much debated topic, but is generally recommended. This can be accomplished with oral ascorbic acid, cranberry juice or ammonia chloride. Renal failure may result from precipitating myoglobin in the renal tubules, therefore caution should be exercised.^{8, 11, 12}

Final Comments

Drug abuse is not just a national problem but one which Mississippi physicians face on an ever-increasing scale. Knowledge of the contemporary street drugs, their effects and clinical presentations provides a basis for effective patient management. Numerous treatment centers offering inpatient, outpatient and family programs exist throughout Mississippi. Table 1 includes facilities listed in the 1988 *National Directory of Alcoholism & Addiction Treatment Programs*.¹⁵ These centers, among others, aid in the counseling and recovery of patients and their families with substance abuse problems.

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Differential Diagnosis of Dementing Diseases

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THE PREVALENCE of dementia in the aging population is reaching epidemic proportions,¹ resulting in primary care physicians seeing an increasing number of cognitively impaired patients for which a diagnosis and etiology must be established. The "death of the brain" produces frightful burdens not only to the patient but also to the family and caregivers of affected individuals. The presentation of cognitive dysfunction includes a complex array of differential diagnosis. Of patients with presenile dementia, 30-50% were found to have been misdiagnosed when follow-up was obtained five to ten years after initial evaluation.² The purpose of this paper is to outline a clinical classification system used in our Geriatric Assessment Clinic for dementing illnesses to aid with ambulatory evaluation.

In community studies, the prevalence of dementing illnesses is about 20%. Although dementias may occur at any age, the frequency increases with aging, affecting about 16% of the young old (65-75 years), and increasing to 20% in the old old (greater than 75 years). The impact of these diseases is enormous, accounting for 75% of all first hospital admissions in the elderly, and from 70,000 to 110,000 deaths per year in the U.S. Furthermore, dementing illnesses are the most common reason for admission to chronic care facilities, accounting for 60% of nursing home beds and an annual cost of approximately \$40 billion dollars for chronic care.³

There is no evidence that aging alone results in cognitive dysfunction. Although aging is associated with an increase in time necessary to complete tasks and mild recent memory loss, no decline in intellect sufficient to cause individual dysfunction is "normal."⁴

The evaluation of dementias is often complex, requiring the input of multiple disciplines. The University of Mississippi Division of Geriatrics/Ger-

The prevalence of dementia in the aging population is reaching epidemic proportions. Normal aging alone does not result in intellectual decline. The author observes that the clinical presentation of cognitive dysfunction involves a complex array of differential diagnoses, illustrated by the first six months' experience in the UMC Geriatric Assessment Clinic. He notes that dementias may be grouped into static, reversible, or progressive types, and he outlines a classification system for dementing illnesses as an aid in clinical evaluation.

ontology has established an outpatient Geriatric Assessment Clinic whose purpose includes diagnosis and management of dementing disease. During the first 6 months of operation, 17 patients have presented with complaints of cognitive dysfunction. Senile dementia of the Alzheimer's type has been the most common diagnosis in 8/17 (47%) of patients. However, the wide spectrum of pathology can be seen in the variety of other diagnoses, including "pseudodementia" (2/17), delirium (2/17), senile dementia of Binswanger's type (2/17), Pick's disease (1/17), glioblastoma (1/17), amentia (1/17), and normal pressure hydrocephalus (1/17).

Definition of Dementing Illness

Dementia is a clinical syndrome of multi-factorial decline from a previously attained intellectual level. Two components are necessary for the diagnosis of dementia: (1) the decline must be sustained in time (but may or may not be reversible); and (2) the decline must be global, that is, involving one or more areas of intellect other than memory. Local or focal areas of functional loss, such as an amnesia, aphasia, agnosia, or apraxia are not included. Mental retardation, or amentia, is excluded.

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A clinically useful scheme groups the dementias into static, reversible, or progressive types. Static dementias usually present no diagnostic difficulties. These dementias are usually the result of head trauma, anoxia, or stroke that is clearly defined in time and does not progress without additional insult.

Reversible Dementias

The potential for diagnosing a reversible cause of cognitive dysfunction is the impetus behind clinical evaluations. In non-selected populations, estimates of reversible dementias range up to 30%.⁵ A major cause of reversible dementias is depressive disorders, the so-called "pseudodementias." In contrast to the progressive dementia disorders, the patient frequently complains bitterly about memory loss.

The causes of reversible dementias are listed in Table 1. Among the chief causes of dementia in elderly patients are drugs. Almost any drug can produce cognitive impairment in the elderly due to altered pharmacodynamics in this population. More frequently reported drug associations are given in Table 2.

A careful clinical evaluation should exclude a diagnosis of reversible dementias. While metabolic, cardiovascular, and infectious etiologies are more easily diagnosed, affective disorders are often missed. Gait disturbances and urinary incontinence should suggest normal pressure hydrocephalus or

multi-infarct dementia of the Binswanger's type. Space-occupying lesions without neurological signs are more often present in the frontal or temporal regions of the brain.

Progressive Dementias

The progressive dementias are the most frequent of the dementing illnesses. These dementias can be grouped in those with no important neurological findings and those with other prominent neurological findings. Alzheimer's disease is the most common of the dementing illnesses with little or no neurological signs, accounting for 50-80% of diagnoses. Also in this category is Pick's disease, although Pick's is far less common.

Progressive dementias with neurological findings include Huntington's disease, Parkinson's disease, cerebellar degenerations, and amyotrophic lateral sclerosis. These dementias with focal signs occur less commonly. There is a strong association of senile dementia of the Alzheimer's type and Parkinson's disease. As many as 30% of patients with Parkinson's disease develop dementia with anatomical similarities to Alzheimer's disease.⁶

Clinical Approach

The clinical approach to a cognitively impaired patient depends largely on a careful history. A delirious state must first be excluded. Delirium is characterized by a clouding of consciousness, that is, a

TABLE 1
COMMON CAUSES OF DELIRIUM

Metabolic disorders
Electrolyte abnormalities
Acid-base disorders
Hypoxia
Hypercapnia
Hypo- or hyperglycemia
Azotemia
Infections
Decreased cardiac output
Dehydration
Acute blood loss
Acute myocardial infarction
Congestive heart failure
Stroke
Drugs
Intoxication
Hypo- or hyperthermia
Acute psychosis
Transfer to unfamiliar surroundings
Other
Fecal impaction
Urinary retention

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TABLE 2
DRUGS THAT CONTRIBUTE TO DELIRIUM OR DEMENTIA

Analgesics	Cardiovascular
Codeine	Atropine
Meperidine	Digitalis
Morphine	Diuretics
Pentazocine	Lidocaine
Propoxyphene	Hypoglycemics
Indomethacin	Insulin
Antihistamines	Sulfonylureas
Diphenhydramine	Psychotropic
Hydroxyzine	Antianxiety
Antihypertensives	Lithium
Clonidine	Tricyclics
Hydralazine	Antipsychotic
Methyldopa	Hypnotics
Propranolol	Other
Reserpine	Cimetidine
Antimicrobials	Steroids
Gentamicin	
Isoniazid	
Antiparkinsonian	

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loss of touch with surroundings and an inability to maintain attention. Delirium develops usually over a period of hours or days, and fluctuates from day to day in intensity. In contrast, dementias rarely have a definite onset in time, attention and consciousness is not impaired, and there is no fluctuation in intensity. Delirium may at times be superimposed acutely on a chronic dementia state.

Vascular dementias, of which multi-infarct dementia is the most common, account for from 10-15% of dementing illnesses.⁷ The history is one of abrupt onset or step-wise deterioration. Hypertension or diabetes are commonly associated and neurological symptoms may be present. There is no evidence that generalized arteriosclerotic intracranial disease in the absence of infarction causes a dementing illness.¹

Physical examination should focus on the presence or absence of neurological symptoms or signs. Standard laboratory examination should include a complete blood count, screening metabolic panel with electrolytes, thyroid function testing, vitamin B12 and folate levels, serological test for syphilis, and AIDS testing in appropriate risk groups. A chest x-ray, electrocardiogram, and urine analysis are often recommended but have less supporting data.

Global dysfunction in cognitive impairment must be documented. Areas such as calculation, praxis, attention, and following commands must be evaluated as well as orientation and recall. The most reproducible of instruments to assess global function is the Folstein Mini-Mental Evaluation. The MMSE takes less than 10 minutes to administer and is highly specific for dementia.⁸ (See Figure 1.) Short mental status tests which rely on memory or orientation alone are not sensitive for global dysfunction. It is the global dysfunction that characterizes the primary dementias. Mild recent memory loss, or "benign senile forgetfulness syndrome" rarely affects the individual's ability to function normally.

Computed tomography of the head is almost always necessary unless the cause of the dementia is obvious. It is important to recognize that diffuse cortical atrophy on CT scan or MRI scan is neither diagnostic nor specific for Alzheimer's disease since these changes can occur with dehydration or other primary neurological disorders. Unless there is suspicion of a space-occupying lesion or focal signs are present on physical examination, radiographic contrast is not necessary and non-use will be less risky in the elderly population.

Various ancillary tests have been recommended but are controversial. Electroencephalography is not useful unless seizure disorders are strongly sus-

Figure 1

FOLSTEIN MINI-MENTAL

PATIENT'S NAME _____ TOTAL SCORE _____

PT'S HIGHEST SCHOOL GRADE COMPLETED _____

EXAMINER _____

MAX SCORE	SCORE	ORIENTATION
5	()	What is the (year) (season) (date) (day) (month)?
5	()	Where are we: (state) (city) (street) (hospital) (floor)?
		REGISTRATION
3	()	Name 3 objects: 1 second to say each. Then ask patient all three objects after you have said them. Give 1 pt. for each correct answer. Then repeat objects until patient learns all three. Count trials and record: _____
		ATTENTION AND CALCULATION
5	()	Serials 7's. One point for each correct. Stop after 5 answers. Alternatively, spell "world" backwards.
		RECALL
3	()	Ask for three objects repeated above. Give one pt. for each correct.
		LANGUAGE AND PRAXIS
1	()	Name a pencil and a watch.
1	()	Repeat the following: "No ifs, ands, or buts."
3	()	Follow a 3-stage command: "Take paper in your right hand, fold it in half, and put it on the floor."
1	()	Read and obey the following:
1	()	Write a sentence:
1	()	Copy this design:

30



pected. Lumbar puncture is not recommended unless signs of infection are present. Carotid ultrasound is of no value unless used in a search for emboli in multi-infarct dementia. Finally, all drugs that are not essential to patient care should be discontinued and the patient re-evaluated at a later date.

Conclusion

The clinical evaluation of dementing illness should be aimed at determining reversible causes. Frequently, however, time alone is necessary to determine the progressive nature of a dementing illness. Labeling of the patient as "senile" or having an "organic brain syndrome" does not offer a useful framework for counseling or understanding a devastating change in an individual. Proper classification of progressive dementing illnesses can be used to help the family cope with prognosis for the patient and in planning for care. ★★★

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The Impact of Ambulatory Glycemic Control on the Insulin-Dependent Diabetic Gravida

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CONTEMPORARY PERINATAL APPROACHES for optimal obstetric management of the diabetic gravida emphasize control of maternal glycemia.¹⁻⁵ Maintenance of euglycemia in the insulin-dependent diabetic gravida has been associated with a reduction in perinatal morbidity and mortality.⁶⁻¹⁰ Although "tight glucose control" for these parturients is a major management goal, many methods of therapy and assessment have been proposed. Fasting, preprandial and postprandial glucose measurements as well as frequent tests for glucosuria have all been used to estimate glucose control.^{6, 10, 11}

Several recommended clinical practices for the diabetic gravida including routine hospitalization in mid-third trimester until delivery, elective preterm delivery, and preferred cesarean delivery have been emphasized as important factors in improved maternal outcome as well as reduced perinatal morbidity and mortality. In response to cost containment and humanistic concerns, there has been a trend in the 1980's toward ambulatory management of the diabetic gravida.^{1-5, 12-15}

This report summarizes the maternal and perinatal results of a pregnancy management protocol for insulin-requiring diabetic parturients (class B or greater) which emphasizes rigorous glucose control via ambulatory patient utilization of reflectance meter determinations of fasting blood glucose (FBG) and two-hour postprandial blood glucose (2-h PPBG) values. Our findings are contrasted to a second group

The pursuit of maternal euglycemia is the cornerstone of contemporary perinatal management of the insulin-requiring diabetic gravida and its achievement has been associated with reduced perinatal morbidity and mortality. The maternal and perinatal results of a pregnancy management protocol for insulin-requiring diabetic gravidas which emphasizes rigorous glucose control via ambulatory patient utilization of reflectance meter determinations of fasting and two-hour postprandial blood glucose is summarized in this report. The authors describe the excellent maternal and neonatal outcomes achieved with this protocol, and emphasize the efficacy of this ambulatory approach to the treatment of insulin-dependent diabetic pregnancies.

of insulin-dependent diabetic gravidas who were also delivered in our tertiary care perinatal center during the same treatment interval but who were not in good diabetic control secondary to noncompliance or lateness of referral.

Materials and Methods

During a four-year interval, 56 insulin-dependent diabetic gravidas were managed at the University of Mississippi Medical Center (UMC) according to a protocol to achieve euglycemia (Group I). All patients in this group came from lower and middle class rural socioeconomic backgrounds and all

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achieved acceptable control with adherence to our protocol. Approximately 400 glucose determinations during pregnancy were recorded by each parturient in Group I. The outcomes of these pregnancies (Group I) are compared to the gestations of 63 insulin-dependent diabetic gravidas (Group II) who were delivered contemporaneously at UMC also but who either were noncompliant or were referred late in gestation for delivery having followed alternative management schemes with less strict glucose control.

All patients in Group I were managed on an ambulatory or in-hospital basis by the same perinatal team nurse and physician providers. With ambulatory management a primary goal, hospitalization was reserved for the newly diagnosed or referred insulin-requiring diabetic grvida as well as any parturient who developed pregnancy-induced hypertension, infection, other serious medical complications or who infrequently had educational and logistical hurdles to outpatient management. Until 32 weeks' gestation, study subjects were seen bi-weekly with at least weekly evaluations scheduled thereafter.

At all times the ambulatory or hospitalized diabetic gravidas utilized a reflectance meter for self-monitoring of blood sugars. Split dose insulin was administered mornings and afternoons as a mixture of NPH and regular insulin. FBG and 2-h PPBG values were obtained daily as were urine acetone determinations. Euglycemia for our purposes was considered to be a FBG ≤ 100 mg/dl and a 2-h PPBG ≤ 150 mg/dl with no acetonuria. Frequent and small insulin adjustments in response to glucose variation coupled with patient involvement and education regarding her disease assisted the achievement of euglycemia.

Other important elements of our protocol include baseline renal, ophthalmologic and uterine-targeted ultrasound examinations as well as a serum alpha-fetoprotein determination at 16 weeks' gestation to screen for neural tube defects. An ADA diet appropriate for weight with caloric distribution ratios over four meals of 2/7, 2/7, 2/7, and 1/7 fractions was constructed and monitored by our diabetic nutritionist. Intensive education, encouragement and monitoring via frequent telephone contacts was performed by specially-trained perinatal nurses. Third-trimester serial sonography and combined nonstress and contraction (nipple stimulation) stress test weekly from 32 weeks onward were performed per protocol. Our policy generally was to await spontaneous labor at term in the absence of worrisome findings with individualization of each case to seek a safe

TABLE 1
CLASSIFICATION OF STUDY SUBJECTS BY WHITE CLASSIFICATION

	<i>B</i>	<i>C</i>	<i>D</i>	<i>Total</i>
Group I (Protocol)	35	14	7	56
Group II	47	13	3	63

TABLE 2
GLUCOSE CONTROL VALUES FROM GROUP I

FBG range: 51-159 mg%
$\bar{X} = 99.1 \pm 3.0$ (SEM)
2-h PPBG range: 84-223 mg%
$\bar{X} = 131.5 \pm 3.3$ (SEM)

labor and vaginal delivery. Intrapartum euglycemia via continuous insulin infusion and continuous electronic fetal monitoring throughout labor and delivery importantly were performed in addition to expert newborn evaluation and care by an experienced neonatal team.

In contrast, insulin-dependent diabetic gravidas in Group II either demonstrated poor compliance and/or were referred late in gestation for delivery having been managed by other care providers utilizing alternative methods of diabetic management. Comparison of mean hemoglobin A_{1c} levels between groups is not possible because this useful parameter to assess recent past blood glucose homeostasis was not introduced into our routine protocol until mid-study nor was it available for Group II gravidas.

Results

There were 56 insulin-dependent diabetic gravidas managed by protocol (Group I) and 63 contemporary nonprotocol insulin-requiring diabetic parturients who did not benefit from strict ambulatory glucose control (Group II). The composition of each group according to White's classification is shown in Table 1.

Outpatient and inpatient recording of blood glucose values during gestation by Group I parturients made possible an assessment of the degree of euglycemia in each patient. The mean FBG (99.1 ± 30 mg/dl) and mean 2-h PPBG (131.5 ± 3.3 mg/dl) values were derived by utilizing data from three days each week (Tuesday, Wednesday, and Thursday) for the weeks of data that were available; 12-

20 weeks in most patients were utilized (see Table 2). The absence of similar data for nonprotocol parturients in Group II precludes any comparative assessment of diabetic control between groups but there were no patients in Group II who had FBG < 100 mg/dl or 2-h PPBG < 140 mg/dl upon entry into our system.

Maternal morbidity is depicted in Table 3. Pregnancy-induced hypertension was a common complication in both study groups. Other maternal complications of diabetes mellitus including diabetic ketoacidosis, pyelonephritis, hydramnios and preterm labor occurred in a larger percentage of Group II parturients than in Group I mothers who participated in the ambulatory management protocol.

Table 4 presents perinatal deaths and congenital malformations. Excluding three parturients with early pregnancy losses, the average gestational age at delivery for Group I parturients was 37.7 weeks. There were three perinatal deaths in association with these pregnancies. One occurred secondary to a prolapsed cord following premature rupture of membranes at 30 weeks, one was a fetal death resulting from spontaneous rupture of a previous classical cesarean section scar at 29 weeks in a 307 pound class B diabetic gravida, and the third death was secondary to severe congenital malformations (caudal regression and hypoplastic lungs). This was the product of a class D diabetic who entered the protocol at 17 weeks' gestation. Eleven Group I pro-

tol parturients had suffered intrauterine fetal deaths in previous gestations. All delivered liveborn infants in the present gestation under treatment. In Group II, eight perinatal deaths occurred, seven being unexplained intrauterine fetal demises at an average gestational age of 36.6 weeks. The eighth neonate died from severe malformations associated with Potter's syndrome following delivery at 35 weeks.

Neonatal morbidity including neonates ≥ 4000 g, shoulder dystocia, hypoglycemia, hyperbilirubinemia, and respiratory distress syndrome (RDS) is depicted in Table 5. The number of infants weighing ≥ 4000 g was evenly distributed between the groups. However, three vaginal deliveries in Group II occurred with severe shoulder dystocia, one with a resultant Erb's palsy. The incidence of neonatal hypoglycemia (≤ 30 mg/dl) in both groups of term neonates was similar, probably reflecting the efforts expended for all diabetic parturients, regardless of antepartum protocol, to achieve intrapartum euglycemia by continuous insulin infusion.

Newborns of Group II diabetic gravidas experienced a greater incidence of hyperbilirubinemia than did the progeny of Group I parturients. Defined as serum bilirubin > 13 mg/dl in the term neonate, hyperbilirubinemia in all infants responded to phototherapy and did not require exchange transfusion. Many of the neonates with hyperbilirubinemia were premature. A diagnosis of hyaline membrane disease (HMD) was made if a neonate required > 50%

TABLE 3
MATERNAL MORBIDITY

	<i>Pregnancy-Induced Hypertension</i>	<i>Diabetic Ketoacidosis</i>	<i>Hydramnios</i>	<i>Pyelonephritis</i>	<i>Preterm Labor</i>
Group I (Protocol)	N = 13 (24.5%)	1 (1.9%)	1 (1.9%)	0 (0.0%)	1 (1.9%)
Group II	N = 11 (17.5%)	3 (4.8%)	3 (4.8%)	2 (3.2%)	6 (9.5%)

TABLE 4
PERINATAL MORTALITY

	<i>Perinatal Deaths</i>	<i>Congenital Malformations</i>	<i>Deaths Unrelated to Diabetes</i>	<i>Corrected Rate</i>
Group I (Protocol)	5	1	2	5.7% (3 of 53 births) 57 per 1000 11.11%
Group II	8	1	0	(7 of 63 births) 111 per 1000

TABLE 5
NEONATAL MORBIDITY

	<i>Shoulder Dystocia</i>	<i>Macrosomia ≤ 4000 g</i>	<i>Hypoglycemia ≤ 30 mg%</i>	<i>Hyperbilirubinemia</i>	<i>RDS (TNN + HMD)</i>
Group I (Protocol)	1 (3.8%)	8 (15.0%)	3 (5.6%)	4 (8.3%)	5 (10.5%)
Group II	3 (8.6%)	9 (14.3%)	4 (6.3%)	12 (21.8%)	9 (16.4%)

oxygen for > 24 h and if it also had radiographic evidence consistent with HMD. If a neonate were tachypneic but did not need oxygen, it was considered to represent transient tachypnea of the newborn. The only case of severe RDS in Group I occurred in association with the difficult cesarean delivery of a term macrosomic neonate following a positive contraction stress test. Transient tachypnea of the newborn was present in five neonates of Group II and mild respiratory distress (not HMD) was present in four others.

Discussion

The essential elements of a protocol for the ambulatory management of pregnancy complicated by class B or greater diabetes mellitus have been presented and illustrated via the case outcomes for 56 parturients (Group I). For purposes of contrast, the outcomes of a contemporary group of insulin-dependent gravidas also delivered at UMC but whose antepartum care was neither characterized by rigorous glucose control or enrollment and adherence to protocol standard is presented as Group II. Many parturients in Group II were referred to UMC late in gestation for management of diabetic complications which might have been avoided had these parturients received antepartal care via the protocol. Their complications and outcomes serve to illustrate the traditional complications of less than rigorous controlled diabetic pregnancy.

The tightly controlled and closely managed parturients of Group I had very favorable outcomes in regard to perinatal mortality and maternal morbidity. The corrected perinatal death rate of 3.7% for the protocol patients is compatible with that reported by others such as Karlson⁷ (3.8%) and Gabbe⁶ (4.5%). With the exception of the fetal losses due to fatal congenital malformations, spontaneous uterine rupture and cord prolapse, only two losses in Group I were related to the mother's diabetic state. If the congenital malformation is not excluded, a perinatal mortality rate of 5.7% for Group I is ob-

tained. In contrast, all perinatal deaths in Group II could be directly related to diabetes mellitus. Hence, the corrected perinatal mortality of our protocol parturients is comparable to the excellent results obtained by other groups.

Preeclampsia is common in our population; the incidence in our protocol patients and in Group II was greater than that of 14% reported in Kitzmiller's population⁸ or Cousin's overall review of pregnancy complications.¹⁶ Other maternal complications such as diabetic ketoacidosis, hydramnios, pyelonephritis, and preterm labor were more commonly encountered in Group II parturients. This is consistent with Pedersen's findings that the occurrence of these complications is associated with a poor fetal outcome.¹⁷

In contrast to reports of high neonatal morbidity rates following carefully managed diabetic gestations,⁶ the incidence of overall neonatal morbidity was low in our protocol parturients. Macrosomic infants weight ≥ 4000 g were born to approximately equal numbers of parturients in both groups at frequencies substantially less than the 22% overall incidence in Gabbe's study.⁶ The incidence in Group I might have been even lower had insulin administration and tight control been initiated earlier in gestation for more of our patients. Hypoglycemia was uncommon in both groups even though our neonatal unit's definition of hypoglycemia is ≤ 30 mg% and many researchers use ≤ 20 mg%. We attribute the low incidence of hypoglycemia to the rigorous intrapartum glucose control which was attempted for parturients in both groups. While both RDS and hyperbilirubinemia have traditionally been common neonatal problems and were more commonly encountered in the nonprotocol individuals of Group II, neither group had significant sequelae from these complications.

The findings of this study are in agreement with the fundamental tenet of diabetic pregnancy management expressed so well by Coustan that "maintaining plasma glucose levels as close to normal as

possible, with the hope of vaginally delivering a normal infant at or close to term" should be the goal of management of the pregnant diabetic.¹⁸ Although the goal of "rigid" glucose control and its relevance to optimal perinatal outcome have been questioned by some,¹⁰ our experience suggests that the achievement and maintenance of euglycemia is the single-most important element of a successful pregnancy management scheme. The use of reflectance meters by our study subjects made this goal possible. Ambulatory reflectance meter monitoring of blood sugars by the parturients facilitates frequent changes in insulin dosages, instills a sense of participation and control by the patient over her disease, and is associated with fewer expensive hospitalizations for complications. Outpatient management until term in conjunction with careful fetal surveillance is demonstrated to be safe and to result in no unexplained fetal demises.

A new goal for obstetricians should be early identification and tight control of the insulin-dependent diabetic gravida prior to conception.^{19, 20} If this can be accomplished, we may reduce both the congenital malformation rate as well as other forms of morbidity in order to achieve outcomes equal to that of nondiabetic gestations. ★★★

Dr. Martin: 2500 North State Street (39126)

Acknowledgment

Supported in part by the Vicksburg Hospital Medical Foundation.

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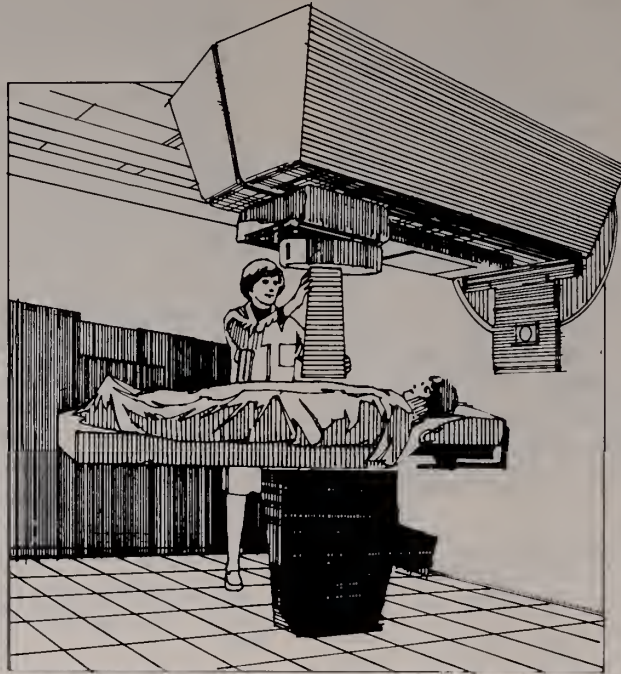
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Part I: What Are the Antitrust Laws?

Collective Negotiation and Antitrust: A Guide for Physicians

INDEPENDENT PHYSICIANS, already subject to substantial government regulation, find themselves under pressure from many third-party payors to reduce their fees, grant discounts or alter their practice. Some payors account for a substantial volume of patients, and are able to obtain concessions from independently practicing physicians. In some situations payors have an unfair advantage in these negotiations because of their purchasing power. A natural, but sometimes dangerous, reaction of individual physicians is to "level the playing field" by joining with their colleagues and dealing with payors collectively over reimbursement and fees.

Collective conduct by independently practicing physicians can result in illegal price-fixing or group boycott agreements under the antitrust laws unless physicians proceed cautiously. Violation of the antitrust laws can involve severe sanctions, including criminal prosecution. Currently, for example, three grand juries are investigating physicians and dentists to determine whether they illegally fixed prices. If convicted, these professionals would be labeled "felons" and could be imprisoned for up to three years and fined up to \$250,000. Moreover, they could lose their licenses to practice.

In addition, physicians can face civil antitrust litigation. A losing antitrust defendant is liable for three times the actual amount of any damages the violation caused and for the attorneys fees of the plaintiff (often in the six to seven-figure range). Any antitrust litigation will involve severe emotional trauma for the physicians and their families.

There is a wide range of effective enforcement mechanisms under the antitrust laws. The United States Department of Justice has authority to bring civil and criminal actions. The Federal Trade Com-

mission also can bring civil antitrust cases and has been very active in the medical area. In addition, state attorneys general can enforce state and federal antitrust laws. Finally, private parties, such as com-

This article is the first in a series on antitrust laws. The articles are reprinted from a brochure published by the American Medical Association.

peting physicians and third-party payors, may bring an action for treble damages, injunctive relief, and attorneys fees.

For these reasons, it is essential for physicians to gain a basic understanding of antitrust law. With this understanding, they can recognize potential problems and seek expert legal advice when appropriate. This brochure explains basic antitrust principles and what physicians and medical societies may and may not do when dealing with fees and reimbursement. It also discusses how physicians can integrate their practices with the effect of reducing antitrust risk. It explains that unions receive no special treatment under the antitrust laws. Finally, it presents several real life situations that physicians could face and the potential antitrust ramifications of each.

Congress enacted the antitrust laws nearly 100 years ago to assure that each individual or firm competes independently. The antitrust law most relevant to physicians is Section 1 of the Sherman Act. In essence, that statute prohibits any concerted action which unreasonably restrains competition. Thus, two elements must be present to establish a violation of this law: 1. *concerted action* which produces; 2. an unreasonable *restraint of competition*.

From the American Medical Association, Chicago, IL.

Concerted Action

No formal written agreement is necessary to satisfy the concerted action element of the Sherman Act. All that is required is an informal understanding. As an association of competing physicians, a medical society will almost certainly satisfy the concerted action element of the Sherman Act. Medical societies must therefore assure that their actions do not unreasonably restrain competition.

Actions by informal groups of physicians can also constitute concerted action. For example, an agreement to fix prices could be inferred from meetings at which physicians discussed fees if afterwards the physicians began charging the same fees. Because concerted activity can be inferred even without a formal agreement, physicians should avoid discussing their fees or engaging in any group activity that could have an impact on competition without first having obtained competent legal advice.

There is a wide range of effective enforcement mechanisms under the antitrust laws . . . it is essential for physicians to gain a basic understanding of antitrust law. With this understanding, they can recognize potential problems and seek expert legal advice when appropriate.

It should be emphasized that unilateral actions do not constitute agreements for purposes of the Sherman Act. Thus an individual physician or a single professional corporation may take any action as long as the physician or group acts independently and not in concert with another. Similarly, fully integrated group practices and IPA's are considered to be single entities. Conduct undertaken by any such entity independently would not satisfy the concerted action element.

Restraint of Competition

Conduct will be considered to be an unreasonable restraint of trade if it is on balance anticompetitive. There are two standards by which the competitive consequences of challenged conduct is determined. Most conduct is examined under the "rule of reason." Under it, a court examines all relevant facts and weighs the procompetitive and anticompetitive effects of the activity.

Some types of conduct, however, are considered always to be anticompetitive. Thus courts do not consider evidence about the purpose or effect of such conduct. These types of conduct are said to be *per se* illegal, regardless of their purpose or their actual effect on competition. It is the *per se* illegal types of agreements that the Department of Justice prosecutes criminally. Physicians, therefore, must

understand what types of agreements are *per se* illegal and must avoid them.

The type of concerted action most likely to be prosecuted criminally is a "naked" *horizontal price-fixing agreement*. A horizontal price-fixing agreement is an agreement or understanding among competitors to raise prices or to charge a particular fee. A "naked" price-fixing agreement is an agreement or understanding about prices that is not part of — or necessary to — other coordination or integration among physicians that, on balance, might be procompetitive. For example, if two or more obstetrical groups in a town agreed with each other upon the fees they would charge for prenatal and perinatal care, their conduct would be a naked price-fixing agreement and would be illegal *per se*.

Another type of agreement that may be considered *per se* unlawful is a group boycott. A group boycott is an agreement among competitors to refuse to deal with another competitor, a supplier, or a customer in order to suppress competition. Physician group boycotts have generally occurred where: 1. physicians jointly refuse to deal with an HMO or similar plan unless certain contract terms are met, or 2. physicians jointly refuse to refer patients to a particular physician or group of physicians for anticompetitive reasons. Boycotts of this type for the purpose of enforcing a price-fixing agreement are illegal *per se*.

Of course, every physician may independently decide whether to contract with an HMO or to refer a patient to another physician. An illegal restraint of competition arises when the physician makes these decisions as part of a group of otherwise independent, competing physicians. Even when acting independently, physicians must be careful not to use the threat of a group boycott in negotiations with third-party payors or in referral relationships with other physicians.

A common situation in which group boycotts are alleged is credentialing. However, physicians who engage in good faith peer review are not exposed to substantial antitrust risk. Peer review actions will almost certainly be judged under the rule of reason. As long as the purpose of the credentialing is to identify and weed out substandard practitioners, the activity is procompetitive. It enables the hospital and staff physicians to compete more effectively by raising the quality of the medical staff. However, as in all concerted action by physicians, peer review procedures should be reviewed by competent legal counsel.

A third type of agreement that is *per se* unlawful is a market allocation arrangement. Examples of

such an arrangement include agreements regarding the geographic area that competing medical groups will serve or the managed care plans with which they will deal. In practice, market allocation agreements involving physicians are highly unusual.

Significantly, a covenant not to compete which applies at the termination of an employment contract will *not* be considered *per se* illegal. Rather, it is ancillary to an employment agreement that enables the employer to compete effectively. Accordingly, a covenant not to compete will be judged under the rule of reason.

In sum, the cornerstone of the Sherman Act is competition. The courts will not tolerate agreements which suppress competition. Competent legal advice is necessary to help physicians determine whether a proposed course of conduct involves concerted action and, if so, whether the conduct is anticompetitive.

Exceptions

Conduct will be considered to be an unreasonable restraint of trade if it is on balance anticompetitive. . . . Two exceptions to the antitrust laws are very important to physicians. The first arises out of

the right to petition the government. The second involves conduct which is clearly authorized and actively supervised by a state.

The First Amendment to the United States Constitution protects the right to petition the government — the executive, the legislature, the courts, and administrative agencies. This constitutional protection permits physicians and medical societies to advocate government action even if that action would harm competition — as long as the advocacy is in good faith. For example, physicians may not threaten to boycott an insurance company unless reimbursement is increased. But physicians may lobby the legislature for a law which would increase reimbursement levels.

The second exception, state action, is rooted in the principle of state sovereignty. Acts of the state itself, in its governmental capacity, are not subject to the antitrust laws. Private parties may take advantage of this exception if their acts were *clearly authorized* and *actively supervised* by the state. For example, credentialing decisions would not be exposed to antitrust scrutiny if the state authorized medical peer review activities and created a system for review of credentialing decisions.

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THE PRESIDENT'S PAGE

J. EDWARD HILL, M.D.

Needed — Your Participation and Leadership!

IN JANUARY each of you will have an opportunity to participate in, gain information, and contribute to the democratic process of Organized Medicine in Mississippi.

On January 18, 1990, (a Thursday) there will be a meeting of our MSMA House of Delegates and a program for all members planned by the Officers and Board of Trustees. The day will include presentations and discussions on current important health issues in our state.

Late last month the Resource Based Relative Value Scale (RBRVS) legislation was passed in Congress. Our January program will begin with an indepth look at the RBRVS and what it holds in store for our future. We will have speakers to give their views to us and allow us to interchange with them.

During the day, we will have a joint meeting of the members of the Mississippi Hospital Association and the Mississippi State Medical Association.

We will have a look at rural health issues in Congress with presentations by Congressmen who are familiar with and conversant on these issues.

We will also have a presentation concerning our Governor's Indigent and Uninsured Care Plans — which we have gone on record in supporting — and in conjunction with this we will hear about how some states hope to prioritize health care for the indigent.

The afternoon session will end with a presentation of our 1990 legislative program which includes: expert witness legislation, insurance industry regulation issues, health care for the uninsured and indigent and our contribution toward solutions to that problem, Medicaid expansion, employee-employer insurance, and risk pools for the uninsured. And then to conclude the day we will host a reception for the legislature, providing an opportunity for interaction with our state lawmakers.

I hope we will get good attendance at this meeting from our membership. Even though we may feel like "a voice in the wilderness," we must continue to voice our feelings and provide leadership to address problems plaguing health care in Mississippi.

Please show up on January 18! We need your participation and leadership.

Students for Medicine

It is distressing to hear of physicians advising young students against choosing medicine as a profession. The reason most often given — too much government interference — is admittedly a reality to be dealt with. All the more reason, then, for the profession to try to attract the most intelligent and dedicated students possible. The more dedicated brainpower we have in this profession, the greater the chance that the problems facing the profession can be solved to the satisfaction of all concerned.

Doesn't it make sense to enlist "the brightest and best" of the young people in this country to be our future colleagues, colleagues who can help to formulate strategies to help organized medicine retain and reinforce its leadership role in the health care industry?

Let us resolve, individually and collectively, to encourage young people to consider medicine as a profession.

GEORGE E. ABRAHAM, II, M.D.
Associate Editor

Medico-Legal Brief

Peer Review Pitfalls and How to Avoid Them

Physicians who receive adverse peer review results from a hospital are frightened, angry, and prone to sue those who participated in the decision. A variety of legal theories may be used to bring such a lawsuit. Key to the defense against any lawsuit is the presentation of evidence that a fair, orderly, objective, and unbiased process was followed in arriving at the adverse result. The plaintiff's lawyer

will look for flaws in the process that may be evidence of unfairness or bias. Those flaws will be used to generate a sense of injustice and to support arguments that poor quality was not the real reason for the adverse result.

Common flaws that the plaintiff's lawyer will look for, and which should be avoided in the peer review process, are as follows:

1. *Conflicts of Interest.* Ideally, physicians who participate in the peer review process should not be in a position to benefit economically, or to benefit in some other way if the physician being reviewed loses hospital privileges. Physicians who may benefit economically include direct competitors in the specialty involved and partners of competitors. Physicians who may benefit in some other way include, for example, those with a long history of enmity with the physician being reviewed.

In small communities, and even in small cities, it may be difficult to find peer reviewers that have no conflicts of interest. In those situations, the medical staff should seek reviewers from outside the community who have no conflicts. Ideally, the medical staff and the physician being reviewed should agree on who from outside of the community should be asked to participate. The presence of agreed on outside reviewers provides assurances that the review process will be fair and objective.

2. *Poorly Documented History.* Sometimes a medical staff will gradually lose confidence in a physician. Then an incident occurs which is seized upon as a reason to engage the peer review process. The incident then may become the primary documented reason why the physician loses privileges. Sometimes the incident is a "straw which breaks the camel's back," meaning that it appears minor or trivial in nature, but comes at the end of a long sequence of transgressions. If the long sequence of

(Continued on page 424)

COMMENT

New and Improved EPSDT

Few would argue that the children of Mississippi represent the future of the state. The promise of that future rests squarely on the healthy growth and development of Mississippi's children. The responsibility for the health care of these children and, consequently, the responsibility for the state's future rests, in large part, in the hands of the state's child health practitioners.

To ensure the availability of comprehensive health care services to Medicaid-eligible infants and children, the Mississippi Medicaid program is committed to the goal of recruiting more private physicians as providers in the Early and Periodic Screening, Diagnosis and Treatment (EPSDT) program. The EPSDT program offers health supervision (formerly called well-child care) including preventive care and gives participating physicians the opportunity to offer that care to their Medicaid-eligible patients.

In an effort to encourage more participation by private providers in the EPSDT program, the Division of Medicaid has made these improvements in the program's operation:

- **Physicians' fees have been increased** to \$22.00 for the initial visit and \$15.00 for each follow-up visit for all Medicaid patients; for Medicaid-eligible children under six years of age, the physician fees are \$25.00 for the initial visit and \$18.00 for each follow-up visit; EPSDT health supervision fees are \$23.00
- **Electronic submission of claims** is accepted and encouraged to speed the billing process; further, the program no longer requires special billing forms and accepts the HCFA-1500 Form for billing;
- **Customary records are generally acceptable**; separate patient records are no longer required;
- **EPSDT providers may choose to see patients under an enrollment arrangement**; through a special agreement patients coordinate their care with that physician; under this arrangement, the provider receives an additional fee for managing each patient's care;
- **Infants in the Perinatal High-Risk Management/Infant Services System (PHRM/ISS) program** are allowed seven additional EPSDT encounters in an effort to resolve nutrition and psychosocial problems. Supervising physician

may apportion visits between nutritionist, social worker and physician as necessary.

As a result of changes in the federal and state eligibility guidelines for the Medicaid program, the number of children eligible for the program continues to increase. During Fiscal Year 1989, 237,610 children up to age 21 years were eligible for the Medicaid program, including EPSDT services. The total number of screening examinations performed under the EPSDT program was 117,008. Private physicians provided 27,947 EPSDT examinations, 8,150 of which were to children under the age of 4 years.

Clearly, more children should receive health supervision. Preventive care is available to them under Medicaid only through the EPSDT program. These children can receive this important care through the increased enrollment of private physicians as providers of EPSDT services. Without this care, Mississippi's children — Mississippi's future — is at serious risk.

For more information about the new and improved EPSDT, write the Division of Medicaid, Office of the Governor, Suite 801, Robert E. Lee Building, 239 North Lamar Street, Jackson, MS 39201-1311, or call 395-6150.

VIRGINIA C. WALKER, R.N., B.S.N.
Jackson, Mississippi

(Ed. Note: This article is reprinted from "Mississippi Healthy Baby Update," Volume 2, Number 3, October 1989. Ms. Walker is the EPSDT coordinator for the Division of Medicaid.)

Reprinted from "Mississippi Healthy Baby Update," volume 3, number 3 (October 1989).
Ms. Walker is the EPSDT coordinator for the Division of Medicaid.

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MEDICAL ORGANIZATION

House of Delegates To Meet During Leadership Conference

MSMA's House of Delegates will meet in Special Session as a part of the 1990 Leadership Conference on Thursday, January 18 at Jackson's Ramada Renaissance Hotel. The day will also include a joint meeting with the Mississippi Hospital Association and a reception for legislators.

Speakers will explore such topics as Medicare reimbursement policies and medical care for the growing medically needy population in the state. Health issues facing the 1990 Congress will be discussed, including rural health matters and prioritizing Medicaid health services.

The afternoon session will include presentations on the MSMA's 1990 legislative program. Discussions will focus on expert witness legislation, matters regarding health insurance (regulation of the industry, employer-employee insurance, and risk pools for the uninsured), expansion of Medicaid, and ways to provide health care for the uninsured and indigent.

MSMA members are encouraged to make plans to attend this important meeting and participate in the effort to provide leadership as solutions to health care issues are sought on both the national and state levels.

UMC Announces Faculty Appointments

Three have been named in faculty appointments to the School of Medicine and centerwide at the University of Mississippi Medical Center for the current academic session.

In the School of Medicine, Dr. J. Scott Allen, Jr., was appointed instructor in psychiatry and human behavior (psychology), and Dr. J. David Dickman, assistant professor of surgery (otolaryngology).

Centerwide, Dr. James B. Hutchins was named assistant professor of anatomy.

Dr. Allen earned the B.S. in psychology in 1979 at Michigan State University and took graduate training at the Illinois Institute of Technology. He has worked in child psychology at the Medical Center and as an alcohol treatment coordinator at the Jackson Veterans Administration Medical Center. He was chief resident in clinical psychology at the Medical Center since 1988.

Dr. Dickman earned the B.A. in 1979 at the University of Oklahoma and the M.S. in 1980 and the Ph.D. in psychology (neuroscience) in 1985 at the University of Wyoming. He took a postdoctoral fellowship in otolaryngology from 1985-1987 at the University of Texas Medical Branch at Galveston, where he has been a NASA research associate since 1987.

Dr. Hutchins earned the B.A. in 1980 at the University of Colorado, the M.A. in 1982 at the University of California, and the Ph.D. in 1985 at Baylor College of Medicine. He was a postdoctoral research associate in cell biology at Vanderbilt University School of Medicine from 1985-1987, when he was appointed research assistant professor in cell biology.

MSMA Members Receive Physicians' Recognition Award

Five MSMA members were named recipients of the AMA Physicians' Recognition Award during October. They are: Drs. Ossama Al-Mefty of Jackson, C. Duane Burgess of Hattiesburg, A. S. Kellum of Tupelo, Joseph Robinson of Jackson, and Robert P. Russell of Jackson.

Physicians can receive the PRA certificate valid for one, two or three years. For a one-year award, physicians report 50 hours of continuing medical education, including 20 hours of Category 1; for the two-year award, physicians report 100 hours of CME, including 40 hours of Category 1; and for the three-year award, physicians report 150 hours of CME, 60 of which are Category 1.

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PERSONALS

GEORGE ABRAHAM, SANDRA BURFORD, LEE GIFFIN and HILDON SESSUMS of the Vicksburg Family Medical Clinic have been selected winners of the 1989 *Patient Care Award for Excellence in Patient Education*. They will be recognized at the 11th Annual Conference on Patient Education in Orlando, Florida, this month.

ROBERT F. ALLEN of Meridian was speaker at a public education seminar on stroke and stroke treatment.

ORLANDO ANDY of UMC made presentations at meetings of the World Society for Stereotactic and Functional Neurosurgery in Marriha and Maebashi, Japan.

OTTIS BALL of Jackson was named a fellow of the American College of Nuclear Medicine at the annual meeting in Chicago.

JIM C. BARNETT of Brookhaven was named president-elect of the Southern Medical Association at the 83rd Annual Scientific Assembly, held in Washington, DC.

HARRIS BARRETT of Pascagoula has been named medical director for Singing River Hospital System's Chemical Dependency Service.

WALTERINE BELL of Meridian has been named one of East Central Community College's Alumni of the Year.

CHRIS BENSON of Hattiesburg spoke on arthritis medications at a meeting of the Arthritis Support Group.

C. RON CANNON of Jackson made presentations at Resident's Forum of the American Academy of Otolaryngology/Head and Neck Surgery and at the Sixth Annual Pediatric Seminar.

MARC CHETTA of Poplarville has been recertified as a diplomate of the American Board of Family Practice.

SUMAN DAS of UMC presented a paper at the 76th Annual Clinical Congress of the American College of Surgeons, and made a presentation at the meeting of the American Association of Hand Surgery and the American Society of Plastic and Reconstructive Surgeons.

ROBBIE DECOUX of McComb spoke on medical waste disposal at a meeting of the McComb Rotary Club.

ALAN FREELAND of UMC lectured at the 25th Annual Orthopedic and Trauma Seminar in Minneapolis.

ROBERT GILLILAND of Kosciusko has been recertified as a diplomate of the American Board of Family Practice.

Hattiesburg Clinic announces the association of LARRY J. HAMMETT and JAMES M. HODGES with C. E. GUICE, III, in the practice of otolaryngology.

GEOFFREY HARTWIG of Hattiesburg was speaker for a meeting of the Epilepsy Support Group of Laurel.

MICHAEL HENRY has associated with Surgery Clinic of Columbus, for the practice of thoracic, vascular and general surgery, and endoscopy.

JAMES L. HUGHES of UMC was keynote speaker for the annual meeting of the Orthopedic Trauma Association in Philadelphia, Pennsylvania.



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PERSONALS/Continued

KELLY HUTCHINS of Laurel was speaker at a seminar on AIDS at South Central Regional Medical Center.

SAMUEL JOHNSON of UMC attended the Board meeting of the Royal Maid Association for the Blind in Gulfport.

WALTER E. JOHNSTON of Vicksburg has been recertified as a diplomate of the American Board of Family Practice.

ELIZABETH KEELING has associated with Rankin Children's Group for the practice of pediatrics at 348 Crossgates Boulevard in Brandon.

WILLIAM LONG of Jackson was speaker at a seminar sponsored by the Hazlehurst Junior Auxiliary.

MICHAEL MAY of Hattiesburg was speaker at a seminar on diabetes presented by Methodist Hospital.

JOHN J. MCCLOSKEY of Pascagoula has been named chief of staff at Singing River Hospital, and FRANK RAWLINGS of Ocean Springs has been named chief of staff at Ocean Springs Hospital.

GEORGE MCGEE of Hattiesburg appeared on "CBS This Morning" for a discussion on treatment of breast cancer.

H. T. MILHORN of UMC lectured at the Family and Medicine and Problems of Families meeting in Madrid, Spain.

FRANCIS MORRISON of UMC attended the annual meeting of the American Association of Blood Banks where he participated in the Transfusion Medicine Academic Award program and chaired a session of Legal Issues in Transfusion Medicine. He also moderated the Scientific Lectureship and was appointed chairman of a Liaison Committee between the National Heart, Lung and Blood Institute, Blood Resources and Education Program, and the Transfusion Medicine Academic awardees.

J. U. MORRISON announces the opening of his practice of general medicine at State Line.

NORMAN NELSON of UMC received Tulane Medical Alumni Association's "Outstanding Alumnus Award."

DAVID OWEN of Hattiesburg spoke on treatment of cancer at a cancer support group meeting at Forrest General Hospital.

ROXANNE PERRYMAN has associated with BEN F. MARTIN and JOHN H. PARKER for the practice of anatomic and clinical pathology at 306 Hospital Drive in Columbus.

MAX PHARR of Jackson received Mississippi College's "Order of the Golden Arrow" award for excellence in professional achievement.

SESHADRI RAJU of UMC was a faculty member at the 1989 Clinical Congress of the American College of Surgeons.

FELIX SAVOIE of UMC made a presentation at the Association for Study of Internal Fixation in Jacksonville, Florida and also presented a paper at the Shoulder Surgery Conference in New York.

CRAIG SLATER has associated with Gulfport Orthopaedic Clinic for the practice of orthopaedic surgery at 4502 Railroad Street.

ROBERT R. SMITH of UMC made a site visit to observe angioplasty at the Burdenkov, Polenov and Kiev Neurosurgical Institutes in Russia, and also made a presentation at the 9th International Congress of Neurological Surgery in New Delhi, India.

PATRICK TARPY of McComb has been named chief of staff at Southwest Mississippi Regional Medical Center.

NANCY O. TATUM of Hattiesburg was speaker at a series on AIDS held at Main Street United Methodist Church.

TATE THIGPEN of UMC has been named president-elect of Optimist International.

JAMES C. WAITES of Laurel has been recertified as a diplomate of the American Board of Family Practice.

MICKEY P. WALLACE of Jackson has associated with Ear, Nose & Throat Surgical Group, P.A., for the practice of otolaryngology, head and neck surgery, and facial plastic surgery.

E. T. WARREN of UMC presented an abstract at the 33rd World Congress of Surgery in Toronto, Ontario, Canada.

WINFRED WISER of UMC spoke at the 1989 Clinical Congress of the American College of Surgeons in Atlanta.

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MEETINGS

National and Regional

American Medical Association, Annual Meeting, June 24-28, 1990, Chicago. James H. Sammons, Executive Vice President, 535 N. Dearborn St., Chicago, IL 60610.

State and Local

Mississippi State Medical Association, 122nd Annual Session, May 30-June 3, 1990, Jackson. Charles L. Mathews, Executive Director, 735 Riverside Drive, P.O. Box 5229, Jackson 39296-5229.

Mississippi Academy of Family Physicians, Annual Meeting, July 25-28, 1990, Gulf Shores, AL. Leontine Stevens, Executive Secy., P.O. Box 1215 Ridgeland 39158.

Amite-Wilkinson Counties Medical Society, 3rd Monday, March, June, September, December. James S. Poole, Secy., The Gloster Clinic, Gloster 39638. Counties: Amite, Wilkinson.

Central Medical Society, 1st Tuesday, February, April, October, December, 6:30 p.m., Primos Northgate Restaurant, Jackson. Patsy Douglas, Executive Secy., 735 Riverside Dr., Jackson, MS 39202. Counties: Hinds, Leake, Madison, Rankin, Scott, Simpson.

Claiborne County Medical Society, 1st Tuesday, each month, 6:00 p.m., Claiborne County Hospital, Port Gibson. D. M. Segrest, Secy., P.O. Box 147, Port Gibson 39150. County: Claiborne.

Clarksdale and Six Counties Medical Society, 3rd Wednesday, April, and 1st Wednesday, November, 2:00 P.M., Clarksdale, Rodney Baine, Secy., 110 Yazoo Ave., Clarksdale 38614. Counties: Coahoma, Quitman, Tallahatchie, Tunica.

Coast Counties Medical Society, January, March, June, and November. H. S. Barrett, Secy., P.O. Box 1810, Gulfport 39501. Counties: Hancock, Harrison, Stone.

Delta Medical Society, 2nd Wednesday, April and October. Walter H. Rose, Secy., 122 E. Baker St., Indianola 38751. Counties: Bolivar, Humphreys, Leflore, Sunflower, Washington, Yazoo.

DeSota County Medical Society, 3rd Thursday, February and August, 1:00 p.m., Kenny's Restaurant, Hernando. Malcolm D. Baxter, Jr., Secy., Baxter Clinic, Hernando 38632. County: DeSoto.

East Mississippi Medical Society, 1st Tuesday, February, April, June, October, December. Charles L. Wilkinson, Secy., Mail: Ms. Jenkins, P.O. Box 4053, Meridian 39305. Counties: Clarke, Kemper, Lauderdale, Neshoba, Newton, Winston.

Homochitto Valley Medical Society, Meetings scheduled quarterly. Fred G. Emrick, Secy., P.O. Box 1488, Natchez 39120. Counties: Adams, Jefferson.

North Central District Medical Society, 3rd Wednesday, March, June, September, January. George V. Smith, 905 Avent Dr., Grenada 38901. Counties: Attala, Carroll, Choctaw, Granada, Holmes, Montgomery, Webster.

Northeast Mississippi Medical Society, 1st Thursday, March, June, September, November, December. David H. Irwin, Secy., P.O. Box 7240, Tupelo 38802. Counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tishomingo, Union.

North Mississippi Medical Society, 1st Thursday, April, September, December. D. Winn Walcott, Secy., 2173 South Lamar, Oxford 38655. Counties: Benton, Lafayette, Marshall, Panola, Tate, Tippah, Yalobusha.

Pearl River County Medical Society, 2nd Monday, March, June, September, December. J. C. Griffing, Secy., Crosby Memorial Hospital, Picayune 39466. County: Pearl River.

Prairie Medical Society, 2nd Tuesday, March, June, September, December. Jack Hollister, Secy., P.O. Box 9000, Columbus 39705. Counties: Clay, Oktibbeha, Noxubee, Lowndes.

Singing River Medical Society, quarterly, December, March, June and September. John J. McClosky, Secy., 3003 Short Cut Rd., Pascagoula 39567. County: Jackson.

South Central Mississippi Medical Society, 2nd Tuesday, March, June, September, December. Julian T. Janes, Secy., 304 Clark, McComb 39648. Counties: Copiah, Franklin, Lawrence, Lincoln, Pike, Walthall.

South Mississippi Medical Society, 2nd Thursday, March, June, September, December. Nancy D. Tatum, Secy., 307 S. 13th Ave., Laurel 39440. Counties: Covington, Forrest, George, Greene, Jasper, Jefferson Davis, Jones, Lamar, Marion, Perry, Smith, Wayne.

West Mississippi Medical Society, 2nd Tuesday, January, May, September, November, 6:30 p.m., Maxwell's Restaurant, Vicksburg. Wayne M. Pitre, Secy., 1202 Mission Park Dr., Vicksburg 39180. Counties: Issaquena, Sharkey, Warren.

Mississippi Institutions and Organizations Accredited for Continuing Medical Education

The following Mississippi institutions and medical organizations have been accredited in accordance with the "Essentials of the Accreditation Council for Continuing Medical Education (ACCME)" and the Council on Medical Education of the MSMA. Information concerning CME programs for physicians offered by these accredited sources may be obtained by writing the Director, Continuing Medical Education, at the individual institution or organization.

Council on Scientific Assembly
Mississippi State Medical Association
735 Riverside Drive
Jackson, MS 39202

North Mississippi Medical Center
830 Gloster Street
Tupelo, MS 38801

Forrest General Hospital
Mamie Street and Highway 49 South
Hattiesburg, MS 39401

Mississippi Baptist Medical Center
1225 N. State Street
Jackson, MS 39202

Gulf Coast Community Hospital
4642 W. Beach Boulevard
Biloxi, MS 39531

Jefferson Davis Memorial Hospital
Sergeant Prentiss Dr.
Natchez, MS 39120

King's Daughter Hospital
Highway 51 N.
Brookhaven, MS 39601

Charter Hospital of Jackson
Lakeland Drive
Jackson, MS 39208

Biloxi Regional Medical Center
150 Reynoir St.
Biloxi, MS 39533

Jeff Anderson Regional Medical Center
2124 14th St.
Meridian, MS 39301

Mercy Regional Medical Center
100 McAuley Dr.
Vicksburg, MS 39180

Golden Triangle Regional Medical Center
2520 Fifth St., North
Columbus, MS 39701

Northwest Mississippi Regional Medical Center
Hospital Dr.
Clarksdale, MS 38614

North Panola County Hospital
1-55 at Highway 315
Sardis, MS 38666

Singing River Hospital
2809 Denny Ave.
Pascagoula, MS 39567

Magnolia Hospital
Alcorn Drive
Corinth, MS 38834

Greenwood Leflore Hospital
1401 River Rd.
Greenwood, MS 38930

Gulfport Memorial Hospital
4500 13th Street
Gulfport, MS 39501

Oxford-Lafayette County Hospital
Highway 7, South
Oxford, MS 38655

St. Dominic-Jackson Memorial Hospital
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NEW MEMBERS

ARRON, BRETT L., Jackson. Born Bridgeport, CT, March 15, 1955; M.D., Tulane University School of Medicine, New Orleans, 1981; one year, Mayo Clinic Graduate School of Medicine; medicine residency, Tulane University, New Orleans, 1982-84; anesthesia residency, Charity Hospitals, LSU School of Medicine, New Orleans, 1986-89; elected by Central Medical Society.

BENAK, EDWARD J., JR., Hattiesburg. Born Omaha, NE, Oct. 20, 1954; M.D., University of Alabama School of Medicine, Birmingham, 1981; pathology residency, same, 1983-87; elected by South Mississippi Medical Society.

BRINSON, RALPH A., Tupelo. Born Jackson, MS, Dec. 31, 1954; M.D., University of Mississippi School of Medicine, Jackson, 1980; interned, pediatric residency, neonatology fellowship, same, 1980-85; elected by Northeast Mississippi Medical Society.

BROCK, CHARLES F., JR., Cleveland. Born Greenwood, MS, April 6, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1986; interned and family medicine residency, University Medical Center, Jackson, 1986-89; elected by Delta Medical Society.

BUNDRICK, JOHN BENNETT, Jackson. Born Shreveport, LA, Nov. 4, 1961; M.D., LSU School of Medicine, Shreveport, 1986; Mayo Graduate School of Medicine, internal medicine, Mayo Clinic, Rochester, MN 1986-89; elected by Central Medical Society.

CAIN, GEORGE L., JR., Corinth. Born Durant, MS, Jan. 22, 1957; M.D., University of Mississippi School of Medicine, Jackson, 1986; Trover Regional Medical Center, Madisonville, KY, 1986-89; elected by Northeast Mississippi Medical Society.

DALE, DENNIS M., Hattiesburg. Born Anniston, AL, June 24, 1956; M.D., LSU School of Medicine, New Orleans, 1983; medicine residency, Montefiore Hospital, Pittsburgh, PA, 1984-86; pulmonary medicine, University of Texas Health Science Center, San Antonio, TX, 1986-88; elected by South Mississippi Medical Society.

DAY, JAMES R., Tupelo. Born Laurel, MS, March 31, 1939; M.D., University of Mississippi School of Medicine, Jackson, 1963; pediatric residency, same, 1963-64 and University of Texas Medical Branch, Galveston, 1964-66; elected by Northeast Mississippi Medical Society.

DURHAM, WILLIAM H., McComb. Born Brookhaven, MS, Nov. 26, 1969; M.D., University of Mississippi School of Medicine, Jackson, 1986; medicine residency, Ochsner Medical Foundation, New Orleans, 1986-89; elected by South Central Medical Society.

EZZELL, JESSE H., JR., Pascagoula. Born Macon, GA, June 24, 1958; M.D., University of South Florida School of Medicine, Tampa, FL, 1984; medicine and gastroenterology residency, University of Alabama, Birmingham, 1984-89; elected by Singing River Medical Society.

FRAZIER, WILLIAM D., Jackson. Born Kingsport, TN, March 17, 1958; M.D., University of Mississippi School of Medicine, Jackson 1984; pulmonary, critical care, sleep disorders, residency, University of Virginia, Charlottesville, 1984-89; elected by Central Medical Society.

JEE, JAMES D., Jackson. Born Ruleville, MS, Nov. 6, 1960; M.D., University of Mississippi School of Medicine, Jackson, 1986; residency in family medicine, Jefferson Regional Medical Center, Pine Bluff, AR, 1986-89; elected by Central Medical Society.

KELLUM, ANDREW HOWARD, Tupelo. Born Tupelo, MS, Dec. 12, 1956; M.D., University of Mississippi School of Medicine, Jackson, 1982; interned and medicine residency, University of Arkansas for Medical Sciences, Little Rock, 1982-86; hematology/oncology fellowship, Oklahoma University Health Science Center, Oklahoma City, 1986-89; elected by Northeast Medical Society.

KELLUM, MARK JACKSON, Tupelo. Born Tupelo, MS, May 27, 1959; M.D., University of Mississippi School of Medicine, Jackson, 1985; ob-gyn residency, Greenville Memorial Hospital, Greenville, SC, 1985-89; elected by Northeast Mississippi Medical Society.

LEE, JOHN MARTIN, JR., Tupelo. Born Hattiesburg, MS, Sept. 2, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned and medicine residency, Baptist Memorial Hospital, Memphis, TN, 1984-87; nephrology residency, University of Tennessee, Memphis, 1987-89; elected by Northeast Mississippi Medical Society.

LEWIS, TERRY ALAN, Corinth. Born Springfield, OH, Aug. 24, 1950; M.D., University of New Mexico School of Medicine, Albuquerque, 1974; ob-gyn residency, Naval Regional Medical Center, Oakland, CA, 1974-78; elected by Northeast Mississippi Medical Society.

MCPHERSON, SCOTT H., Jackson. Born New Orleans, Aug. 11, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned University of Arkansas, Little Rock, one year; radiology residency, University Medical Center, Jackson, MS, 1985-89; elected by Central Medical Society.

MELVIN, BARBARA M., Jackson. Born Jackson, TN, Aug. 16, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1985; interned, pediatric residency, and ambulatory pediatrics fellowship, University Medical Center, Jackson, MS, 1985-89; elected by Central Medical Society.

MILLER, STANLEY LEE, Jackson. Born Maryville, TN, June 17, 1958; M.D., University of Mississippi School of Medicine, Jackson, 1984; interned and medicine residency, Vanderbilt University Medical Center, Nashville, TN, 1984-87; gastroenterology fellowship, Ochsner Clinic, New Orleans, 1987-89; elected by Central Medical Society.

PATTON, GREGORY O., Oxford. Born Gainesville, FL, March 31, 1959; M.D., Baylor College of Medicine, Houston, TX, 1985; interned and ob-gyn residency, University of Louisville, Louisville, KY, 1985-89; elected by North Mississippi Medical Society.

ROBERTS, THOMAS S., Jackson. Born New Orleans, April 22, 1956; M.D., Louisiana State University School of Medicine, Shreveport, 1982; interned and orthopedic surgery residency, University Hospital, Little Rock, AR, 1982-87; orthopedic surgery fellowship, Louisiana State University Medical Center, New Orleans, 1987-88; elected by Central Medical Society.

SLATER, CRAIG M., Gulfport. Born New Castle, PA, Sept. 26, 1950; M.D., University of Pittsburgh School of Medicine, Pittsburgh, 1976; interned and orthopedic surgery residency, Cleveland Clinic, Cleveland, OH, 1976-81; elected by Coast Counties Medical Society.

VAUGHAN, WILLIAM H., JR., Jackson. Born Jackson, MS, May 17, 1941; M.D., University of Mississippi School of Medicine, Jackson, 1967; interned one year, Wilford Hall USAF Hospital,

Lackland AFB, TX; psychiatry residency, Tulane University School of Medicine, New Orleans, 1971-74; elected by Central Medical Society.

WAHL, DAVID A., Jackson. Born Urbana, IL, Jan. 26, 1959; M.D., University of Florida College of Medicine, Gainesville, 1984; interned and radiation oncology residency, Medical College of Virginia, Richmond, 1984-88; elected by Central Medical Society.

WARDEN, CLARK G., Pascagoula. Born New Orleans, July 29, 1960; M.D., Tulane University School of Medicine, New Orleans, 1984; interned and surgery residency, University of North Carolina, Chapel Hill, 1984-89; elected by Singing River Medical Society.

WHITE, JAMES L., Tupelo. Born Limestone County, AL, April 17, 1957; M.D., University of Alabama School of Medicine, Birmingham, 1984; interned and orthopedic surgery residency, University Medical Center, Jackson, MS, 1984-89; Elected by Northeast Mississippi Medical Society.

WOLFE, WALTER RAY, Jackson. Born Pine Bluff, AR, Oct. 22, 1958; M.D., University of Mississippi

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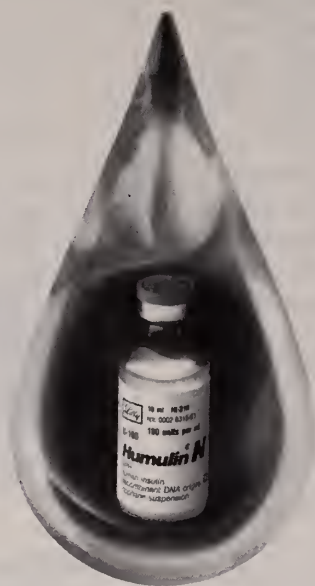
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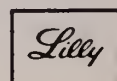


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January-December, 1989

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MEDICO-LEGAL BRIEF

(Continued from page 405)

transgressions is not documented and expressly made part of the decision to withdraw privileges, the withdrawal may appear to be unreasonable or arbitrary as being based on a minor incident.

An appearance of unreasonableness lends credibility to arguments that the process was biased. Therefore, it is important to carry out peer review on a regular and orderly basis, and to document the process, so that a proper foundation for both positive and negative future decisions is in place.

3. *Going Through the Motions.* When key members of a medical staff have lost confidence in a physician, they may decide that it is time to terminate the physician's privileges, and the only remaining question is how to do it. In other words, they have decided to "hang him after a fair trial." A period of consensus building may follow, during which they seek support from other physicians for an effort "to get rid" of the transgressor. Evidence

that a decision had been made to terminate a physician's privileges before the peer review hearings took place is convincing evidence that the peer review process itself was not fair and objective. Such evidence also lends credibility to arguments that anticompetitive or Machiavellian motives tainted the process. Therefore, it is very important to let the peer review process work. When physicians become concerned about a colleague, the information which caused the concern should be put into the peer review process, and the process should be left alone. No organized effort should be made which places or appears to place peer reviewers in the position of going through the motions.

4. *Uneven Impositions of Standards.* Physicians with abrasive personalities sometimes fare more poorly in the peer review process than those who are well liked. There is a tendency to judge more harshly those individuals who have generated a lot of ill will. If such a physician sues, his or her record will be compared with others who may have committed similar transgressions without the subsequent loss of privileges. Therefore, it is important for peer reviewers to be consistent in their application of standards.

5. *Use of Unfair Procedures.* Peer reviewers should use fair procedures and not take short cuts in arriving at a decision. There is an infinite number of ways to structure a fair process. Key elements of any fair process are reasonable notice to the physician being reviewed of charges and times and places of hearing, access by the physician to information necessary to defend against the charges, an opportunity for the physician to respond to the charges, an opportunity for the physician to have the benefit of a skilled advocate, and an opportunity for the physician to have an adverse decision reviewed by a different set of peer reviewers. Lack of any of these elements may be evidence that the physician was not treated fairly.

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(Continued from page 417)

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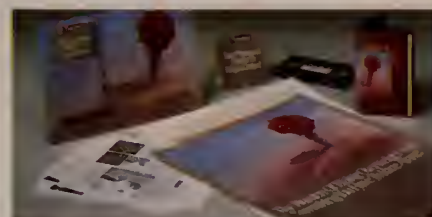
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Hypotension: Excessive hypotension is rare in uncomplicated hypertensive patients treated with VASOTEC alone. Heart failure patients given VASOTEC commonly have some reduction in blood pressure, especially with the first dose, but discontinuation of therapy for continuing symptomatic hypotension usually is not necessary when dosing instructions are followed, caution should be observed when initiating therapy. (See DOSAGE AND ADMINISTRATION.) Patients at risk for excessive hypotension, sometimes associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death, include those with the following conditions or characteristics: heart failure, hyponatremia, high-dose diuretic therapy, recent intensive diuresis or increase in diuretic dose, renal dialysis, or severe volume and/or salt depletion of any etiology. It may be advisable to eliminate the diuretic (except in heart failure patients), reduce the diuretic dose, or increase salt intake cautiously before initiating therapy with VASOTEC in patients at risk for excessive hypotension who are able to tolerate such adjustments. (See PRECAUTIONS, Drug Interactions and ADVERSE REACTIONS.) In patients at risk for excessive hypotension, therapy should be started under very close medical supervision and such patients should be followed closely for the first two weeks of treatment and whenever the dose of enalapril and/or diuretic is increased. Similar considerations may apply to patients with ischemic heart disease or cardiovascular disease in whom an excessive fall in blood pressure could result in a myocardial infarction or cerebrovascular accident. If excessive hypotension occurs, the patient should be placed in supine position and, if necessary, receive an intravenous infusion of normal saline. A transient hypotensive response is not a contraindication to further doses of VASOTEC, which usually can be given without difficulty once the blood pressure has stabilized. If symptomatic hypotension develops, a dose reduction or discontinuation of VASOTEC or concomitant diuretic may be necessary.

Neutropenia/Agranulocytosis: Another ACE inhibitor, captopril, has been shown to cause agranulocytosis and bone marrow depression, rarely in uncomplicated patients but more frequently in patients with renal impairment, especially if they also have a collagen vascular disease. Available data from clinical trials of enalapril are insufficient to show that enalapril does not cause agranulocytosis at similar rates. Foreign marketing experience has revealed several cases of neutropenia or agranulocytosis in which a causal relationship to enalapril cannot be excluded. Periodic monitoring of white blood cell counts in patients with collagen vascular disease and renal disease should be considered.

Precautions: *General:* **Impaired Renal Function:** As a consequence of inhibiting the renin-angiotensin-aldosterone system, changes in renal function may be anticipated in susceptible individuals. In patients with severe heart failure whose renal function may depend on the activity of the renin-angiotensin-aldosterone system, treatment with ACE inhibitors, including VASOTEC, may be associated with oliguria and/or progressive azotemia and rarely with acute renal failure and/or death.

In clinical studies in hypertensive patients with unilateral or bilateral renal artery stenosis, increases in blood urea nitrogen and serum creatinine were observed in 20% of patients. These increases were almost always reversible upon discontinuation of enalapril and/or diuretic therapy. In such patients, renal function should be monitored during the first few weeks of therapy.

Some patients with hypertension or heart failure with no apparent preexisting renal vascular disease have developed increases in blood urea and serum creatinine, usually minor and transient, especially when VASOTEC has been given concomitantly with a diuretic. This is more likely to occur in patients with preexisting renal impairment. Dosage reduction and/or discontinuation of the diuretic and/or VASOTEC may be required.

Evaluation of patients with hypertension or heart failure should always include assessment of renal function. (See DOSAGE AND ADMINISTRATION.)

Hyperkalemia: Elevated serum potassium (> 5.7 mEq/L) was observed in approximately 1% of hypertensive patients in clinical trials. In most cases these were isolated values which resolved despite continued therapy. Hyperkalemia was a cause of discontinuation of therapy in 0.28% of hypertensive patients. In clinical trials in heart failure, hyperkalemia was observed in 3.8% of patients, but was not a cause for discontinuation.

Risk factors for the development of hyperkalemia include renal insufficiency, diabetes mellitus, and the concomitant use of potassium-sparing diuretics, potassium supplements, and/or potassium-containing salt substitutes, which should be used cautiously, if at all, with VASOTEC. (See Drug Interactions.)

Surgery/Anesthesia: In patients undergoing major surgery or during anesthesia with agents that produce hypotension, enalapril may block angiotensin II formation secondary to compensatory renin release. If hypotension occurs and is considered to be due to this mechanism, it can be corrected by volume expansion.

Information for Patients:

Angioedema: Angioedema, including laryngeal edema, may occur especially following the first dose of enalapril. Patients should be so advised and told to report immediately any signs or symptoms suggesting angioedema (swelling of the face, extremities, eyes, lips, tongue, difficulty in swallowing or breathing) and to take no more drug until they have consulted with the prescribing physician.

Hypotension: Patients should be cautioned to report lightheadedness especially during the first few days of therapy. If actual syncope occurs, the patients should be told to discontinue the drug until they have consulted with the prescribing physician.

All patients should be cautioned that excessive perspiration and dehydration may lead to an excessive fall in blood pressure because of reduction in fluid volume. Other causes of volume depletion such as vomiting or diarrhea may also lead to a fall in blood pressure; patients should be advised to consult with the physician.

Hyperkalemia: Patients should be told not to use salt substitutes containing potassium without consulting their physician.

Neutropenia: Patients should be told to report promptly any indication of infection (e.g., sore throat, fever) which may be a sign of neutropenia.

NOTE: As with many other drugs, certain advice to patients being treated with enalapril is warranted. This information is intended to aid in the safe and effective use of this medication. It is not a disclosure of all possible adverse or intended effects.

Drug Interactions:

Hypotension: *Patients on Diuretic Therapy:* Patients on diuretics and especially those in whom diuretic therapy was recently instituted may occasionally experience an excessive reduction of blood pressure after initiation of therapy with enalapril. The possibility of hypotensive effects with enalapril can be minimized by either discontinuing the diuretic or increasing the salt intake prior to initiation of treatment with enalapril. If it is necessary to continue the diuretic, provide close medical supervision after the initial dose for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and DOSAGE AND ADMINISTRATION.)

Agents Causing Renin Release: The antihypertensive effect of VASOTEC is augmented by antihypertensive agents that cause renin release (e.g., diuretics).

Other Cardiovascular Agents: VASOTEC has been used concomitantly with beta-adrenergic-blocking agents, methyldopa, nitrates, calcium-blocking agents, hydralazine, prazosin, and digoxin without evidence of clinically significant adverse interactions.

Agents Increasing Serum Potassium: VASOTEC attenuates potassium loss caused by thiazide-type diuretics. Potassium-sparing diuretics (e.g., spironolactone, triamterene, or amiloride), potassium supplements, or potassium-containing salt substitutes may lead to significant increases in serum potassium. Therefore, if concomitant use of these agents is indicated because of demonstrated hypokalemia, they should be used with caution and with frequent monitoring of serum potassium. Potassium-sparing agents should generally not be used in patients with heart failure receiving VASOTEC.

Lithium: A few cases of lithium toxicity have been reported in patients receiving concomitant VASOTEC and lithium and were reversible upon discontinuation of both drugs. Although a causal relationship has not been established, it is recommended that caution be exercised when lithium is used concomitantly with VASOTEC and serum lithium levels should be monitored frequently.

Pregnancy—Category C: There was no fetotoxicity or teratogenicity in rats treated with up to 200 mg/kg/day of enalapril (333 times the maximum human dose). Fetotoxicity, expressed as a decrease in average fetal weight, occurred in rats given 1200 mg/kg/day of enalapril but did not occur when these animals were supplemented with saline. Enalapril was not teratogenic in rabbits. However, maternal and fetal toxicity occurred in some rabbits at doses of 1 mg/kg/day or more. Saline supplementation prevented the maternal and fetal toxicity seen at doses of 3 and 10 mg/kg/day, but not at 30 mg/kg/day (50 times the maximum human dose).

Radioactivity was found to cross the placenta following administration of labeled enalapril to pregnant hamsters.

There are no adequate and well-controlled studies of enalapril in pregnant women. However, data are available that show enalapril crosses the human placenta. Because the risk of fetal toxicity with the use of ACE inhibitors has not been clearly defined, VASOTEC[®] (Enalapril Maleate, MSD) should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Postmarketing experience with all ACE inhibitors thus far suggests the following with regard to pregnancy outcome: Inadvertent exposure limited to the first trimester of pregnancy has not been reported to affect fetal outcome adversely. Fetal exposure during the second and third trimesters of pregnancy has been associated with fetal and neonatal morbidity and mortality.

When ACE inhibitors are used during the later stages of pregnancy, there have been reports of hypotension and decreased renal perfusion in the newborn. Oligohydramnios in the mother has also been reported, presumably representing decreased renal function in the fetus. Infants exposed *in utero* to ACE inhibitors should be closely observed for hypotension, oliguria, and hyperkalemia. If oliguria occurs, attention should be directed toward support of blood pressure and renal perfusion with the administration of fluids and pressors as appropriate. Problems associated with prematurity such as patent ductus arteriosus have occurred in association with maternal use of ACE inhibitors, but it is not clear whether they are related to ACE inhibition, maternal hypotension, or the underlying prematurity.

Nursing Mothers: Milk in lactating rats contains radioactivity following administration of ¹⁴C enalapril maleate. It is not known whether this drug is secreted in human milk. Because many drugs are secreted in human milk, caution should be exercised when VASOTEC is given to a nursing mother.

Pediatric Use: Safety and effectiveness in children have not been established.

Adverse Reactions: VASOTEC has been evaluated for safety in more than 10,000 patients, including over 1000 patients treated for one year or more. VASOTEC has been found to be generally well tolerated in controlled clinical trials involving 2987 patients.

HYPERTENSION: The most frequent clinical adverse experiences in controlled trials were headache (5.2%), dizziness (4.3%), and fatigue (3%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in controlled clinical trials were diarrhea (1.4%), nausea (1.4%), rash (1.4%), cough (1.3%), orthostatic effects (1.2%), and asthenia (1.1%).

HEART FAILURE: The most frequent clinical adverse experiences in both controlled and uncontrolled trials were: dizziness (7.9%), hypotension (6.7%), orthostatic effects (2.2%), syncope (2.2%), cough (2.2%), chest pain (2.1%), and diarrhea (2.1%).

Other adverse experiences occurring in greater than 1% of patients treated with VASOTEC in both controlled and uncontrolled clinical trials were: fatigue (1.8%), headache (1.8%), abdominal pain (1.6%), asthenia (1.6%), orthostatic hypotension (1.6%), vertigo (1.6%), angina pectoris (1.5%), nausea (1.3%), vomiting (1.3%), bronchitis (1.3%), dyspnea (1.3%), urinary tract infection (1.3%), rash (1.3%), and myocardial infarction (1.2%).

Other serious clinical adverse experiences occurring since the drug was marketed or adverse experiences occurring in 0.5% to 1% of patients with hypertension or heart failure in clinical trials in order of decreasing severity within each category:

Cardiovascular: Cardiac arrest, myocardial infarction or cerebrovascular accident, possibly secondary to excessive hypotension in high-risk patients (See WARNINGS, Hypotension), cardiac arrest, pulmonary embolism and infarction, rhythm disturbances, atrial fibrillation, palpitation.

Digestive: Ileus, pancreatitis, hepatitis or cholestatic jaundice, melena, anorexia, dyspepsia, constipation, glossitis.

Nervous/Psychiatric: Depression, confusion, ataxia, somnolence, insomnia, nervousness, paresthesia.

Urogenital: Renal failure, oliguria, renal dysfunction (See PRECAUTIONS and DOSAGE AND ADMINISTRATION).

Respiratory: Bronchospasm, rhinorrhea, asthma, upper respiratory infection.

Skin: Herpes zoster, pruritus, alopecia, flushing, photosensitivity.

Dther: Vasculitis, muscle cramps, hyperhidrosis, impotence, blurred vision, taste alteration, tinnitus.

A symptom complex has been reported which may include fever, myalgia, and arthralgia, an elevated erythrocyte sedimentation rate may be present. Rash or other dermatologic manifestations may occur. These symptoms have disappeared after discontinuation of therapy.

Angioedema: Angioedema has been reported in patients receiving VASOTEC (0.2%). Angioedema associated with laryngeal edema may be fatal. If angioedema of the face, extremities, lips, tongue, glottis, and/or larynx occurs, treatment with VASOTEC should be discontinued and appropriate therapy instituted immediately. (See WARNINGS.)

Hypotension: In the hypertensive patients, hypotension occurred in 0.9% and syncope occurred in 0.5% of patients following the initial dose or during extended therapy. Hypotension or syncope was a cause for discontinuation of therapy in 0.1% of hypertensive patients. In heart failure patients, hypotension occurred in 6.7% and syncope occurred in 2.2% of patients. Hypotension or syncope was a cause for discontinuation of therapy in 1.9% of patients with heart failure. (See WARNINGS.)

Clinical Laboratory Test Findings

Serum Electrolytes: Hyperkalemia (See PRECAUTIONS), hyponatremia.

Creatinine, Blood Urea Nitrogen: In controlled clinical trials, minor increases in blood urea nitrogen and serum creatinine, reversible upon discontinuation of therapy, were observed in about 0.2% of patients with essential hypertension treated with VASOTEC alone. Increases are more likely to occur in patients receiving concomitant diuretics. In patients with renal artery stenosis (See PRECAUTIONS.) In patients with heart failure who were also receiving diuretics with or without digitalis, increases in blood urea nitrogen or serum creatinine, usually reversible upon discontinuation of VASOTEC and/or other concomitant diuretic therapy, were observed in about 1% of patients. Increases in blood urea nitrogen or creatinine were a cause for discontinuation in 1.2% of patients.

Hemoglobin and Hematocrit: Small decreases in hemoglobin and hematocrit (mean decrease was 0.3 g and 1.0 vol %, respectively) occur frequently in either hypertension or heart failure patients treated with VASOTEC, but are rarely of clinical importance unless another cause of anemia coexists. In clinical trials, less than 0.1% of patients discontinued therapy due to anemia.

Dther (Causal Relationship Unknown): In marketing experience, rare cases of neutropenia, thrombocytopenia, and bone marrow depression have been reported.

Liver Function Tests: Elevations of liver enzymes and/or serum bilirubin have occurred.

Dosage and Administration: *Hypertension:* In patients who are currently being treated with a diuretic, symptomatic hypotension may occasionally occur following the initial dose of VASOTEC. The diuretic should, if possible, be discontinued for two to three days before beginning therapy with VASOTEC to reduce the likelihood of hypotension. (See WARNINGS.) If the patient's blood pressure is not controlled with VASOTEC alone, diuretic therapy may be resumed.

If the diuretic cannot be discontinued, an initial dose of 2.5 mg should be used under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.)

The recommended initial dose in patients not on diuretics is 5 mg once a day. Dosage should be adjusted according to blood pressure response. The usual dosage range is 10 to 40 mg per day administered in a single dose or in two divided doses. In some patients treated once daily, the antihypertensive effect may diminish toward the end of the dosing interval. In such patients, an increase in dosage or twice-daily administration should be considered. If blood pressure is not controlled with VASOTEC alone, a diuretic may be added.

Concomitant administration of VASOTEC with potassium supplements, potassium salt substitutes, or potassium-sparing diuretics may lead to increases of serum potassium (See PRECAUTIONS).

Dosage Adjustment in Hypertensive Patients with Renal Impairment: The usual dose of enalapril is recommended for patients with a creatinine clearance > 30 mL/min (serum creatinine of up to approximately 3 mg/dL). For patients with creatinine clearance ≤ 30 mL/min (serum creatinine ≥ 3 mg/dL), the first dose is 2.5 mg once daily. The dosage may be titrated upward until blood pressure is controlled or to a maximum of 40 mg daily.

Heart Failure: VASOTEC is indicated as adjunctive therapy with diuretics and digitalis. The recommended starting dose is 2.5 mg once or twice daily. After the initial dose of VASOTEC, the patient should be observed under medical supervision for at least two hours and until blood pressure has stabilized for at least an additional hour. (See WARNINGS and PRECAUTIONS, Drug Interactions.) If possible, the dose of the diuretic should be reduced, which may diminish the likelihood of hypotension. The appearance of hypotension after the initial dose of VASOTEC does not preclude subsequent careful dose titration with the drug, following effective management of the hypotension. The usual therapeutic dosing range for the treatment of heart failure is 5 to 20 mg daily given in two divided doses. The maximum daily dose is 40 mg. Once-daily dosing has been effective in a controlled study, but nearly all patients in this study were given 40 mg, the maximum recommended daily dose, and there has been much more experience with twice-daily dosing. In addition, in a placebo-controlled study which demonstrated reduced mortality in patients with severe heart failure (NYHA Class IV), patients were treated with 2.5 to 40 mg per day of VASOTEC, almost always administered in two divided doses. (See CLINICAL PHARMACODYNAMICS AND CLINICAL EFFECTS.) Dosage may be adjusted depending upon clinical or hemodynamic response. (See WARNINGS.)

Dosage Adjustment in Heart Failure Patients with Renal Impairment or Hyponatremia: In heart failure patients with hyponatremia (serum sodium < 130 mEq/L) or with serum creatinine > 1.6 mg/dL, therapy should be initiated at 2.5 mg daily under close medical supervision. (See DOSAGE AND ADMINISTRATION, Heart Failure, WARNINGS, and PRECAUTIONS, Drug Interactions.) The dose may be increased to 2.5 mg b.i.d., then 5 mg b.i.d. and higher as needed, usually at intervals of four days or more, if at the time of dosage adjustment there is not excessive hypotension or significant deterioration of renal function. The maximum daily dose is 40 mg.

For more detailed information, consult your MSD Representative or see Prescribing Information, Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, PA 19386.

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